Chapter 5

Development Policy for Private Manufacturing Industries

5. Private Manufacturing Industry Development Policies

5.1 Development Policy for Private Manufacturing Industries (PMIs)

5.1.1 Significance of the Development of PMIs

The development of PMIs is expected to play the following important roles in Myanmar's future economy.

(1) Enhancement of international competitiveness

The international environment surrounding Myanmar is expected to change dramatically as demonstrated below in and after 2005.

1) With the abolition of the Multi-Fiber Agreement at the end of 2004, the competition to export is expected to intensify, as Myanmar will lose the import quotas for textiles and garments allocated by the United States and European countries, which are its major export markets. Exports of Chinese textiles and garments, which have been held down to more or less the same levels over the past decade in the European and American markets, are expected to increase dramatically. This is because there is latent excess demand for Chinese products in the European and American markets and the decline in Chinese costs resulting from the decline in quota transaction costs.

2) Starting in January 2005, China will be required to fully implement the conditions of its accession to the World Trade Organization. Such conditions include the guarantee of convertibility of its currency, the end to dumping and export subsidies, reductions in tariff and non-tariff barriers and guarantee of transparency in trade measures, the end to compulsory export requirements imposed on foreign companies and the protection of intellectual property rights. As a result, local production in and technology transfer to China by foreign companies are expected to accelerate further, further expanding exports of electrical and electronic products, machinery, and metal and chemical products from China. The competition, including that with the ASEAN nations, is expected to become increasing fierce.

3) From around 2008, non-tariff barriers will be removed and import tariffs will be reduced to 5% or less in accordance with the provisions of the AFTA. This should intensify competition against imports from other ASEAN nations in Myanmar's domestic market. Unless Myanmar focuses on the development of private manufacturing industries, various

industries in Myanmar may not be able to compete against imports in the domestic market.

4) In January 2009, the safeguard regulations of the United States against China will be lifted, removing quantitative restrictions on the exports of Chinese products to the United States. Unless Myanmar can mass produce products that are differentiated from those from China for exports to the United States, Myanmar's export competitiveness may decline.

5) In January 2016, the anti-dumping regulations of the United States against China will be lifted, removing regulations on low prices of Chinese products exported to the United States. Therefore, unless Myanmar can strengthen cost competitiveness vis-à-vis China in exports to the United States, Myanmar's export competitiveness may decline.

While the international economic environment will change as described above, Myanmar urgently needs not only to improve product strategies but also reform various policies and systems. Myanmar needs to improve its investment environment in particular to promote the introduction of foreign capital, or it will lag behind in the improvement of technologies and quality and will be unable to win in international competition. This is why it is necessary to nurture a large number of private manufacturing industries that have the capability of cultivating markets.

(2) Job creation

The number of registrations of private enterprises increased from 24,117 companies in fiscal 1992/1993 to 35,597 companies in fiscal 1999/2000. As a result, the number of employees also increased from 112,000 in fiscal 1992/1993 to 186,000 in fiscal 1999/2000. The three labor-intensive industries of food, textiles and garments, and wood processing employ particularly large numbers of people, with these industries accounting for 77% of total employments in all registered private enterprises. The textiles and garment, and wood processing industries are the top and second largest industries in terms of the amount of exports of processed goods. The food industry, on the other hand, is the largest import-substitution industry. With the above-mentioned changes in the international environment surrounding Myanmar in and after 2005 looming on the horizon, it is hoped that by steadily implementing structural reform of the economy proposed in this report, Myanmar will increase the number of private manufacturing industries and create a large number of job opportunities.

At the same time, as there is large latent pool of labor force in rural villages and SOEs, it is hoped that the development of private manufacturing industries will create jobs for redundant labor force that will result from the mechanization of agriculture and reform of SOEs.

(3) *Advancement of industrial structure*

At approximately 60%, the ratio of the primary industries in Myanmar's industrial structure is the highest among the ASEAN nations. However, the primary industries grew at an annual rate of only approximately 4% between fiscal 1986/1987 and fiscal 1998/1999, while private manufacturing industries grew at an annual rate of nearly 20% during the same period. For Myanmar to raise the level of industrial structure and accelerate economic growth, it is necessary to increase the ratio of private manufacturing industries and raise the level of the country's industrial structure. The development of private manufacturing industries that process primary products, such as food processing, garment-manufacturing and wood processing, will have the effect of promoting the shift from the primary industries to the secondary industries.

A desirable picture of Myanmar's industrial structure is the one in which SOEs, private enterprises and foreign companies engaged in industrial activities will develop side by side with industrial linkage among them. In the present industrial activities, however, there is little linkage among enterprises and there are no private SMEs that supply parts to SOEs or foreign or joint venture companies. It is hoped that the development of SMEs will increase transactions between SMEs and other industrial sectors, which in turn will help create multi-strata industrial linkage. If small and medium-sized supporting enterprises that are able to supply parts and materials to SOEs and foreign and joint venture companies are nurtured, these firms will be able to obtain stable supplies of parts and reduce production costs. It will also raise the levels of secondary industries.

(4) Responses to issues facing private manufacturing industries and the use of entrepreneurial spirit

While private manufacturing industries will play a leading role in the future economy of Myanmar, it is necessary to solve various problems facing many of them. At present, not a few proprietors of private manufacturing industries are forced to intentionally avoid doing all they can. Some refrain from expanding their businesses beyond a certain scale, while others forego meeting long-term challenges. According to private manufacturing industries, this is because of the government's discriminatory treatment of them vis-à-vis SOEs and a lack of transparency of policies and their frequent changes. The solution of many problems facing private manufacturing industries will give full reign to entrepreneurial spirit. It is hoped that the basic environment for an economic system in the market economy model will be improved and that discriminatory treatment between SOEs and private manufacturing industries will be ended. In addition to improving administrative procedures, basic systems relating to industrial development, including the export, foreign exchange and land systems and technological development, should be built.

The following are analyses of problems and priorities and recommendations for the development policies for private manufacturing industries, ranging from the correction of discriminatory treatment of some enterprises to measures necessary for strengthening international competitiveness of Myanmar.

5.1.2 Macro Structure of Private Manufacturing Industries

First, let us confirm the position of the private sector in Myanmar's economy. Economic reform of the present regime began with the implementation of two laws, Foreign Investment Law (November 1988) and State Enterprise Law (March 1989), which form the two pillars of the reform. With the implementation of Foreign Investment Law, the introduction of foreign private capital was resumed after a hiatus of 25 years, while State Enterprise Law has allowed the entry of private enterprises into all industrial sectors with the exception of 12 designated sectors. In addition, with the aim of promoting the development of private enterprises, Private Manufacturing Industry Law and its procedures were promulgated in November 1990 and October 1991, respectively. In October 1994, Myanmar Citizens Investment Law was promulgated. It stipulates the forgiveness of income tax for three years after the start of a business, waiver of tariffs on imports of capital goods as initial investment and other broad incentives. The government also announced an easing of price controls and export and import regulations, the commencement of border trade, a reduction in government subsidies, end to government guarantees extended to SOEs, privatization of SOEs, streamlining of taxes and tariffs, the creation of industrial zones and improvement of infrastructure and implemented some of them. However, as a result of the Asian currency crisis of 1997, the government has implemented a protective policy for SOEs, including increases in their sales prices, while imposing various restrictions on private enterprises, including compulsory conversion of the foreign exchange at inferior exchange rates; suspended incentives and increased administrative intervention in their activities. Based on the available data made public[1], the status of the private sector in Myanmar's economy as measured by economic indicators is as follows.

(1) GDP composition

1) On the surface, the ratio of the private sector in total GDP is high at 76%. This is because 98% of agriculture, which accounts for 35% of total GDP and is the largest sector in the economy, belongs to the private sector. Under the socialist regime, agriculture was not

[1] Real GDP for fiscal 1998/99 was calculated on the basis of constant prices for fiscal 1985/86. Sources of data are issues of "Statistical Yearbook", and "Review of the Financial, Economic and Social Conditions".

collectivized and land ownership was left in the hands of farmers, but farmers were under strict state control and were forced to produce according to the government's plans and sell their output to the government at low prices. Even today, at least a few remnants of the old regime exist. For example, exports of rice and teak wood are completely monopolized by the state, while those of raw cotton and sesame are virtually limited to SOEs. Moreover, with respect to rice production, i) since the government has maintained its purchase price of rice at about the same level as farmers' production cost, little income is left in the farmers' hand, making it difficult for them to purchase or replace farming tools or purchase fertilizers; ii) the permission to shift from rice production to other crops is not easily given; and iii) rice exports are state monopoly.

2) Energy, electric power, communication and social and administrative services, which combined account for 3% of GDP, are completely monopolized by SOEs. SOEs own approximately 50% of all forestry and construction businesses and financial institutions, which combined account for 8% of total GDP. For example, in the forestry sector, logging of lumber is controlled by the Ministry of Forestry and is carried out by Myanmar Timber Enterprises (MTEs). The distribution of lumber (domestic sales and exports) on the other hand is under oligopoly of MTEs. Private enterprises are engaged in only wood (lumber) processing and some part of the distribution of processed wood products.

3) The ratios of the private sectors are relatively high in three industries, namely processing and manufacturing, transportation and commerce. The private sector accounts for 71% of the processing and manufacturing industry, which makes up 9% of total GDP, and 69% of transportation, which makes up 4% of total GDP. The private sector accounts for 76% of commerce, which makes up 21% of total GDP.

(2) Company registration

1) There has been a sharp increase in the number of registrations of private enterprises.[2] It increased 24 times from a total of 1,776 companies at the end of fiscal 1989/1990 to 42,262 companies in fiscal 2000/2001. However, although the number of registered private enterprises increased sharply through fiscal 1996/1997, the rate of increase has since declined due to the impact of the Asian currency crisis of July 1997.

[2] Sources are various data concerning the number of the registrations of private enterprises collected from the Directorate of Hotels and Tourism, the Directorate of Investment and Company Administration and the Directorate of Trade, etc.

2) The number of the registrations of private enterprises belonging to light industries that are under the jurisdiction of the Ministry of Industry No. 1[3] increased from 24.117 in fiscal 1992/1993 to 35,597 in fiscal 1999/2000. As a result, the number of employees increased from 112,000 to 186,000 during the same period.

3) A breakdown by industry of the registrations of private enterprises belonging to light industries that are under the jurisdiction of the Ministry of Industry No.1 shows that in fiscal 1999/2000, 62% were in food processing, 8% in automobile repairs and wood processing, 6% in garment-manufacturing, and 3% in metal products. These top five industries accounted for nearly 90% of the total number of registrations. In terms of the number of employees by industry, in fiscal 1999/2000, 51% were in food processing, 10% in garment-manufacturing, 9% in wood processing, 7% in leather and hide and 6% in auto repairs. These top five industries accounted for slightly over 80% of the total.

(3) The number of employees of private manufacturing industries

1) According to statistics[4] concerning the number of factories and businesses by type of ownership (SOEs, co-operatives or private enterprises) and by the number of employees for fiscal 1998/1999, 94% of the 56,000 establishments from which data were obtained were small factories and establishments with less than 10 employees. Among these very small factories and establishments, 98% were owned by the private sector.

2) On the other hand, of the 56,000 establishments from which data were collected, 1% were relatively large factories and establishments with more than 100 employees. Of these, 68% were SOEs.

3) The breakdown by ownership of the above-mentioned 56,000 establishments was 3% SOEs, 1% co-operatives and 96% private enterprises. On the other hand, the composition of production value added was 28% SOEs, 1% co-operatives and 71% private enterprises. Although state-owned factories and establishments accounted for only 3% of the total number of factories and establishments, since they employed large numbers of employees, they accounted for nearly 30% of the production value added.

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[3] Private Enterprise Law adopted in November 1990 stipulates that all private enterprises using power of 3 horsepower or more or employing at least 10 paid workers must register with the Bureau of Supervision and Inspection of the Ministry of Industry No. 1. The enforcement procedures of Private Enterprise Law adopted in February 1991 requires that all existing private enterprises register with the relevant authorities within 120 days from February 1, 1991.

[4] Sources of data are issues of "Statistical Yearbook"

Although these economic indicators do not show changes in the industrial structure, the private sector has been growing steadily. Recently, however, inadequate industrial infrastructure needed for further development of the private sector and excessive government intervention in the private sector have been seen as problems. In the following sections, the present status of private manufacturing industries will be presented based on our questionnaire and interview surveys.

5.1.3 Problems and Priorities of PMIs

(1) The present status of private manufacturing industries as revealed by an analysis of the questionnaire survey

A questionnaire survey covering approximately 690 private enterprises was conducted during the six-month period starting in July 2001. There were a total of approximately 80 question items, including sub-items. The results of this survey have revealed the present status of private manufacturing industries in Myanmar, centering on their characteristics and problems and priorities. This study will analyze these characteristics and problems and priorities in the three frameworks of i) organizational format of manufacturing enterprises in Myanmar, ii) their founding and business performance, and iii) impediments to business activities.

1) With regard to organizational format, we will examine whether there are more firms that engage in production by themselves or whether there are more subcontractors. The questionnaire survey has revealed that including very small establishments, a predominant share of companies engaged in in-house production and that there were only a few subcontractors. The reasons for the underdevelopment of subcontractors in Myanmar are that i) companies have not reached the scale where they will require subcontractors; ii) large private enterprises that exist in some areas and large SOEs are mostly engaged in integrated production and do not have the setup to form division of labor with SMEs; and iii) SMEs are technologically not equipped to engage in subcontracted production work. Meanwhile, among the enterprises with 100 or more employees, the typical international subcontracting-type enterprises are those working on a commission basis, i.e., they receive equipment and raw materials from foreign companies and work on a fee basis to produce goods for export.

2) Establishment of the business and business performance

a) A characteristic concerning the year of establishment of the business was as follows. Since

Myanmar began to switch its economy into a market economy in 1988, a predominant number of businesses were established in or after 1989. Although most of these businesses are small personal enterprises, there are many large enterprises, such as garment-manufacturers and other companies working on commission, and those engaged in the production of fruit juices, which is one of the representative process industries. Ninety percent of enterprises with 100 or more employees have been established in or after 1989. It is noteworthy that in Myanmar, there have been very active creation of businesses and the formation of some large-scale enterprises since 1989.

b) An examination of the previous occupations of business proprietors shows that many of them were employees of family-owned businesses, independent business-owners or traders. Many proprietors of small businesses employing fewer than 10 employees or those employing 10 to 19 workers fall into the first two categories. Our interview survey has revealed that a large number of former independent business owner-managers were found in machinery and metal enterprises, especially in machine repairs and replacement parts businesses that do not require much capital. An extremely high percentage of proprietors of businesses employing 100 or more workers were former traders. Many of these people had accumulated wealth while working as traders in border trade or domestic distribution, or had succeeded in export and import trade by taking advantage of connections they had established during their overseas stay and have become industrial capitalists.

c) As to business performance since the founding, there were a few (less than 10%) that were recognized as realizing "dramatic growth." A great majority (slightly below 70%) were recognized as achieving "so-so growth." Slightly less than 30% of all enterprises were recognized as being "stagnant."

d) How are Myanmar businesses faring in the international market? Eight percent of all establishments are engaged in exports. While the ratio of enterprises engaged in exports is low among smaller businesses, the ratio is higher among larger enterprises. The major export items, in the descending order of the volume of exports, are garments, lumber and wood products, and food materials. Approximately 30% of the enterprises cited the United States, which is imposing an economic blockade on Myanmar, as the major export destination, revealing a very fragile structure in which risk and return exist side by side. It is thus necessary to diversify export markets.

3) Among the impediments to business activities, the most frequently cited factor was a power shortage (cited by 63.9% of respondents, multiple responses allowed). This was followed by shortages of raw materials and parts (34.2%), constraints to fund-raising (15.8%), a shortage of technological information (15.5%), aging of equipment (13.5%), a shortage of experts (10.9%), etc. The problems often cited by exporting companies included many procedures required under the export system (42%), inadequate industrial infrastructure (41%) and dual exchange rates (36%). Often-cited policy needs included stable power supply (67.4%), difficulties in fund-raising (32.9), provision of technological information (31.3%), tax forgiveness or reductions (20.9%) and obtaining overseas information (11.2%).

(2) Contents of impediments

The following are an examination of impediments based on the results of the questionnaire survey.

1) The greatest problem in Myanmar is a power shortage. It impedes production not only directly but also indirectly through higher costs of fuels for in-house diesel-engine power generation. It also stands in the way of new plant and equipment investment and the development of new electricity-consuming products.

2) The problem of raw materials and parts shortages is diverse, ranging from unstable supply of raw materials to poor quality of domestic raw materials, and increases in the prices of domestic and imported raw materials. This is against such backgrounds as raw materials shortages (such as cotton) resulting from the monopoly of these products by SOEs and price fluctuations of imported raw materials resulting from the manipulation of the exchange rate, according to our interview survey.

3) With respect to constraints to fund-raising, contrary to our expectation, the number of firms responding "no problems" exceeded that of firms responding "have problems." Our interview survey has revealed that many business proprietors perceived borrowing from banks as high risk. The reasons for this include the fact that since the period of bank lending is short, running from one to two years, the repayment is due very soon, and the need to offer a great deal of collateral due to the low assessment rate of collateral and the fear of the liquidation of the collateral in case of default. Because of aversion to these risks, most business proprietors preferred to run their businesses within the limits of their own capital (cited by 93% of the respondents in our questionnaire survey, multiple responses allowed). Business proprietors who borrowed from banks were a minority

(30%). Therefore, the fact that respondents answered "no problems" concerning constraints to fund-raising does not mean that many companies were able to raise funds. The basic reasons that fund-raising has not emerged as a major problem in Myanmar are that since most businesses are very small household or family-owned enterprises, their owner-managers do not have strong desire to expand their businesses and that since growth potential of businesses is small, their investment in inventories and plant and equipment is small. Constraints to fund-raising will be discussed in detail in the next section on SME financing policy.

4) The greater the need for technology for their products, the greater is the problem of the shortage of technological information for the companies. The majority of respondents answered that their sources of technological information were "friends and peers." This is followed by "trading partners," which accounted for approximately 30%. In our interviews, we found such comments as "we want brochures of foreign-made equipment," indicating a shortage of information of the kind that seems quite easy to obtain. As these comments show, there is an extreme shortage of overseas information in Myanmar. In this sense, Myanmar is isolated from the rest of the world.

5) In Myanmar, as there is conspicuous aging and obsolescence of equipment, as demonstrated by the fact that weaving machines made in Japan in the 1950s and their copies are still in use, many companies expressed the need to replace their old equipment. Myanmar's law does not ban the imports of used machinery, but there are serious administrative constraints. When a private enterprise plans to import used machinery, it has to obtain approval from the Myanmar Investment Commission (MIC), the Trade Council and the Minister of Commerce. This takes considerable time and work. There are many private enterprises that wish to import unused old machinery, provided that their performances are inspected fully.

6) There were many firms that cited shortages of experts. Questions regarding educational levels of employees designed to see their attributes have revealed that 38% of employees were middle school graduates, 32% elementary school graduates, 12% high school graduates and 5% university graduates. Most of the employees have only low levels of education and their vocational training is inadequate. Our interviews have revealed that one reason for the shortage of experts was job-hopping. In Myanmar new employees are often hired through the introduction of employees. By combining this fact with the prevalence of job-hopping, one can assume that there are employees who, after acquiring some skills, change jobs easily based on information circulating among employees.

7) Our interviews have revealed many requests from respondents regarding the cumbersome export procedures and inadequate disclosure of relevant information. For example, in the garment industry, which makes the largest processed export item, it has been requested that the government streamline the procedures for the issuance of export licenses, disclose customs clearance rules, simplify the procedures for the issuance of import licenses, simplify cargo inspection, eliminate the cargo acceptance at the time of export, allow the application and issuance of certificates of origin prior to exports, issue GSP Form A prior to exports, and so on.

Another problem is the regulations on the conversion into the kyat of foreign exchange earned from exports other than exports of products made on commission. Since such foreign exchange must be used for importing raw materials, the exporter must find an importer, pay in dollars for the imports of raw materials on behalf of the importer and receive payments of the equivalent amount in kyat from the importer. This system is not only cumbersome but also erodes the incentives to export.

8) Inadequate industrial infrastructure

This subject is discussed in detail in the chapter on industrial infrastructure development. However, one should note that the inadequate development of Myanmar's industrial infrastructure is due to a shortage of development funds rather than to an inadequate master plan for infrastructure development. In addition to the country's tight financial conditions, the country is under constraints regarding export markets and investment and loans due to economic blockade by the United States and European countries. Because of this factor, even the most capable investment banks find it difficult to raise ODA funds or private funds (including BOTs and BOOs) for the development of industrial infrastructure in this country. We have pointed out in other chapters that under these circumstances, it is more effective for the development of private manufacturing industries to concentrate infrastructure development in specific regions rather than implement it in broad areas. In this chapter, we propose to go one step further from the development of export processing zones to the development of special economic zones.

9) Multiple exchange rates

Our interviews conducted from 2001 to 2002 have revealed the following problem of multiple exchange rates. While SOEs which are primarily importers, enjoy a preferential rate (6 kyats to a U.S. dollar), an inferior exchange rate (450 kyats to a U.S. dollar) was applied to foreign exchange revenues from exports of garments sewn on commission, an inferior exchange rate (300 kyats to a U.S. dollar) was applied to foreign exchange revenues from exports of sesame, and another inferior exchange rate (250 kyats to a U.S. dollar) was

applied to 15% of foreign exchange revenues from exports of marine products (the market rate for the remaining 85%).

10) Ten percent tax on exports

The 10% tax (8% in commercial tax and 2% in income tax, both to be paid in the U.S. dollar) imposed exclusively on private enterprises has the effect of constraining exports. Such taxation on exports not only increase the tax burden on private enterprises but is also time-consuming for these companies because of the cumbersomeness of the procedures for filing tax returns.

11) Frequent policy changes

Since the policies of the government of Myanmar do not take into account their effects on private enterprises, they are changed frequently. It is especially so for those concerning exports. As a recent case involving onions has demonstrated, even though a private enterprise had already obtained an export license, exports were abruptly banned. The exporter is bound to suffer an enormous loss if it has already purchased the inventory. The legal sources of business law are Myanmar Citizens Investment Law, Foreign Investment Law, Contract Act, Special Company Act, Arbitration Act, etc., but their application is easily and abruptly changed by MIC or the Trade Council.

12) Correction of labor practices that are biased toward employees and work against employers

This is a problem common to former colonies of Britain, including India, Sri Lanka, Pakistan and Bangladesh, although the nature of the problem differs slightly from country to country. In Myanmar, even if a worker is in a trial employment period or is paid by the day, a severance benefit equivalent to at least one-month's pay must be paid when employment is terminated. If an employee is terminated after the trial period but within one year after the commencement of the employment, the mandatory severance benefit is equivalent to at least two-month's pay. Moreover, even when a labor contract prohibiting labor strikes is approved by the Labor Bureau, if an employee is terminated for having taken part in a labor strike or having committed theft, an employer is required to pay an amount equivalent to several months' average pay for having terminated the employment, if he or she files a complaint with the Labor Bureau.

13) Correction of high business cost

For example, a food processor is required to use expensive, low-quality domestic sugar (approximately $275/ton) rather than inexpensive, high-quality imported sugar (approximately $150/ton). The same holds true for wheat flour. (The price of domestic

wheat flour is 20% higher than the international price.) Moreover, urethane resin used by furniture makers is supplied only by one state-owned chemical company. Its quality is poor and comes in only one kind. In addition, supplies from SOEs are not stable, making it necessary for private enterprises to keep large inventories of raw materials.

14) Level playing field for SOEs and private enterprises

The problem of the absence of level playing field (LPF) exists in some developing countries, but private enterprises in Myanmar have the following disadvantages: disadvantages in the allocation of export quotas for garments; a 10% export tax on exports imposed only on private enterprises, disadvantages in electric power charges and restrictions on power use, etc. By industry, since state-owned Myanmar Timber Enterprises have the concession to engage in integrated operations, ranging from logging to processing and selling, private enterprises are at a disadvantage.

5.1.4 Development Policy for PMIs

(1) Classification of PMIs by the stage of the development of organizational format

Characteristics of private manufacturing industries have been analyzed in order to propose solutions for the problems they face as well as development policies for them. Identification of the characteristics of private manufacturing industries will lead to the creation of an SME policy (or a household or family-owned enterprise policy) that can respond to problems and priorities facing household and family-owned enterprises, which account for the bulk of SMEs. At the same time, this means formulating a development policy for PMIs which can respond to the problems and priorities of personal-tie enterprises and capital-tie enterprises, which are expected to grow in the future, albeit in small numbers. The characteristics of Myanmar's private manufacturing industries are as follows:

a) In Myanmar, household or family-owned enterprises, personal-tie enterprises, capital-tie enterprises, each of which represent different stages of development, exist side by side. Our questionnaire survey covering 690 private enterprises taken in 2001 has revealed that at 86% of the total, household or family-owned enterprises (personal enterprises) accounted for a predominant share, while personal-tie enterprises accounted for 6% and capital-tie enterprises 8%. This finding more or less matches the official data concerning the number of the registrations of private enterprises which we have discussed earlier.

b) The characteristics of household or family-owned enterprises are that the same individual act as the capitalist, proprietor, manager and operator and that there is strong leadership of the

patriarch as daily life and business are not separated and as family serves as a business unit. In Myanmar, most of these enterprises are sole proprietorship/personal entities or family-owned businesses. The assumption for the business is to make a living and there is only a little awareness of pursuing profits. This is why a considerable number of business owner-managers respond "We are happy if we can eat our meals every day," when asked about the objective of running their businesses. Our questionnaire survey has revealed that on average 50% of the companies covered by the survey did not separate daily life from business. The smaller the number of employees, the higher was the ratio of those that did not distinguish between daily life and business operations: 71% among the establishments having less than 10 employees, 34% among those having 10 to 99 employees and 11% among those employing 100 or more workers. Among household or family-owned businesses employing less than 10 workers, 68% responded that they did not have corporate accounting independent from the owner-manager. Also, 76% of business owner-managers responded that they did not prepare independent profit and loss statements. In contrast, among capital-tie enterprises with 100 or more employees, 78% of the proprietors were practicing corporate accounting using double entry bookkeeping and only 9% of the proprietors failed to respond. To the question on whether they prepared an independent profit and loss statement, 95% of the proprietors responded that they did.

Household or family-owned enterprises were then classified by industry. These firms were engaged in, in the descending order of percentages, repairs, machinery, agricultural machinery, metal processing, footwear, paper, food, woodwork, plastics, electrical machinery, beverages and leather and hide. The number of employees per establishment was less than 10. The capital equipment ratios in these sectors are low. Production is often being carried out by the so-called "village blacksmith" operating in industrial zones which had five or fewer employees. In the South Dagon Industrial Zone in a suburb of Yangon and in industrial zones in Mandalay, there are areas where clusters of repair and imitation technologies have been formed and where division of labor between procurement of raw materials and other materials, production and selling has developed. Most of the owner-managers of businesses using mechanical technologies, such as repairs, machinery, agricultural machinery and electrical machinery are full-blooded Myanmar and there are very few ethnic Chinese. They improve the technologies they have learned from their masters, copy technologies by observing foreign products, make a living by running a cottage industry and have a strong intention of passing their expertise on to their children and family.

c) In personal-tie enterprises, although there is a separation of ownership and operations, one person still acts as the capitalist, entrepreneur and manager. Although this is the feature of

these enterprises, in legal terms, they often take the form of a co-operative or a partnership (formally, unlimited company without share capital[5]). The partnership format has the advantage of having simple procedures for the establishment. Since the present procedures for the establishment of limited companies (formally, companies limited by guarantee not having share capital,[6] companies limited by guarantee having share capital[7]) or joint stock companies (formally, companies limited by shares) are regulated by a large number of special laws, including Private Industrial Sector Enterprise Law of 1990 and the procedures for the Law set in 1991 in addition to Company Law of 1913 (as amended in 1991) and Special Company Law of 1950, it requires a huge amount of paperwork in addition to screening, on-site inspections by the authorities, approval and company registration. The process is very cumbersome and time-consuming. Moreover, since the establishment of an enterprise in the manufacturing sector requires government approval rather than mere reporting, one cannot rule out the possibility of not receiving approval. Therefore, an entrepreneur who prefers to start a business quickly rather than raising sizable equity chooses the partnership format, which requires less work for the establishment. However, in a partnership, the business proprietor must make decisions with the agreement of investors, and in the case of insolvency, all investors jointly have the obligation of directly repaying without limit the company's debts to creditors by putting up their entire personal assets. Thus, the basis for the credibility of the company is the close personal ties among the investors. When personal-tie enterprises are classified by industry, the top-ranking sectors are, in the descending order of their shares, garment-manufacturing, electrical equipment and furniture. These companies meet part of the demand from domestic consumption (traditional clothing, including longi) or for import-substitution (for motors from Thailand or China, furniture from Malaysia, etc.), but some are engaged in exports (flooring materials, etc.) as well. The number of employees per establishment is 10 or more but less than 100 or so.

d) The characteristic of a capital-tie enterprise is that ownership and management are separated and although the investor is also the entrepreneur, experts are hired for management of the business. Since business is distinguished from daily life, cost- and profit-awareness is stronger. In Myanmar, they frequently take the form of a limited liability company or a joint stock company. Therefore, in case of insolvency, all investors jointly have the obligation to fill up the capital within the limit of the amount of their respective investment.

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[5] Similar to a general partner of an unlimited partnership or an unlimited partner of a partnership in Japan.
[6] Similar to a limited partner of a partnership in Japan.
[7] Similar to limited private companies in Japan.

Thus, very close personal relationship among the investors is a necessary but not sufficient condition. The basis for the company's creditworthiness is the company assets that are sufficient to repay business liabilities. As the depth of business increases, a capital-tie enterprise evolves from the separation in form of capital (ownership) and management, which is characterized by minority shareholder control, to real separation between ownership and management, which is characterized by investors' withdrawal from the activities of the business and control is passed on to managers. Since there are no cases of the latter two models in Myanmar, they are not included in the discussion of the development policy for private manufacturing industries which will be presented later.

The shares of capital-tie enterprises are high in garment-manufacturing, beverages, footwear and chemical products in the descending order of their shares. Some capital-tie enterprises are found among the garment and footwear makers who are engaged in mass production of items according to the same standards for exports and work under manufacturing-on-commission agreements, and beverage and chemical companies that are engaged in mass production for sale in the domestic market using overseas technology and equipment. Consequently, export-oriented companies in these categories are located in the suburbs of Yangon, where labor costs are low and which are close to the port, because it is convenient for exporting and also for importing raw materials and other materials. Domestic market-oriented enterprises in this group are also usually located in the suburbs of Yangon, which are close to big markets. The number of employees per establishment often exceeds 100.

The following table shows the distribution of enterprises by organizational format (legal status), industrial sector and the number of employees based on the findings of our questionnaire survey. It would help understand the concept of organizational format.

Table 5-1 Distribution of Enterprises in Myanmar by Organizational Format

Organizational format	Household or family-owned businesses (personal business)	Personal-tie enterprises	Capital-tie enterprises
Legal format (a breakdown of 690 firms responding to the questionnaire)	Sole proprietorship (75%) Family-owned businesses (11%)	Co-operative (1%) Partnership (5%)	Limited company (7%) Joint stock company (1%)
Major lines of business (ratio of the relevant format)	Repairs (SP: 95%), machinery (SP: 90%), agricultural machinery (SP: 89%), metal processing (SP: 86%), footwear (SP: 83%), paper (SP: 82%), food and wood processing (SP: 74%), plastics (SP:67%), electrical equipment (SP: 64%), beverages (SP: 46%), leather and hide (FO: 50%)	Garment-manufacturing (P: 26%), electrical equipment (P: 21%), furniture (P: 18%)	Garment-manufacturing (PRL: 42%), beverages (PRL: 20%), footwear (PRL: 16%), chemical products (PUL: 10%)
Enterprises with less than 10 employees (ratio of the relevant format)	Sole proprietorship (88%), Family-owned business (10%)	Co-operative (1%) Partnership (1%)	Limited company (0%) Joint stock company (0%)
Enterprises with 100 or more employees (ratio of the relevant format)	Sole proprietorship (75%) Family-owned business (11%)	Co-operative limited (1%) Partnership (5%)	Limited company (7%) Joint stock company (0%)

Notes: SP refers to sole proprietorship; FO: family-owned enterprises; P: partnership; CO: co-operative; PRL: limited private company and PUL: joint stock company.

Source: A questionnaire survey covering 690 enterprises taken by the Study Team in 2001.

(2) The picture and policy for the development of PMIs

The development policy for private manufacturing industries is an industrial policy aimed at the realization of a desirable condition of the industry. An industrial policy consists of industrial infrastructure policy, industrial structure policy and industrial organization policy. With respect to industrial infrastructure policy, the development of industrial infrastructure is very important in Myanmar and this subject will be discussed in detail in the chapter on industrial infrastructure development. Regarding industrial structure policy, in Myanmar the important objectives are the promotion of import-substitution and expansion of exports for the improvement of the trade balance and the solution of the problem of unemployment. These themes are discussed in detail in the chapter on industrial vision. With respect to industrial organization policy, primary consideration is given to the differences due to the size of businesses and an SME policy for the development of enterprises is very important. This subject will be discussed in detail in this chapter.

As discussed earlier, the policy needed by the private manufacturing industries in Myanmar is a development policy which is at the same time an SME policy that responds to the problems and priorities of household or family-owned enterprises, which account for the bulk of businesses in the country. At the same time, it must also respond to the problems and priorities of personal-tie enterprises and capital-tie enterprises, which are expected to grow in the future, albeit in small numbers.

Based on this basic philosophy, development policies for private manufacturing industries are classified into five categories for discussion: policies for export-oriented manufacturing industries, import substitution-type manufacturing industries, the development of supporting industries, the development of rural industries and the promotion of joint ventures with foreign companies. This chapter will then discuss an SME policy (which is rather a household or family-owned enterprise policy), centering on the problems and priorities of household or family-owned enterprises, which account for a large share of private enterprises.

1) Export-oriented manufacturing industries

Processed product exports in which private manufacturing industries play significant roles are garment-manufacturing (31% of total exports), processed wood (lumber) products (2%) and footwear (1%). As the development potential of the electrical machinery and electronics industry is discussed in the chapter on foreign direct investment (FDI) using the example of Earth Industry Company, this summary will discuss the major problems and priorities and measures to address them for the above-mentioned three industries.

a) Garment-manufacturing

Deregulation in rival countries, such as China, Vietnam, Bangladesh and Cambodia, in anticipation of the abolition of the MFA in 2005 will affect Myanmar's export competitiveness. In China, for example, as a result of its accession to World Trade Organization, institutional reforms are now underway to end opaque administrative management and discriminatory rules that work against private enterprises and foreign companies. Although Myanmar plans to compete against China and other neighboring countries in garment-manufacturing, it will be impossible to win in the export competition unless it implements institutional reforms that are more aggressive than those in the neighboring countries.

While international competition is thus intensifying, the government of Myanmar has decided that the garment industry is a mere service industry as the spillover effects of exports of items produced on commission are small. As a result, in or around August 2001, the government imposed a mandatory application of an exchange rate of 450 kyats to the U.S. dollar on foreign exchange earnings (sewing fees only) of companies engaged in sewing on commission. The removal of this requirement is an urgent task.

It is not correct to assume that exports of items produced on commission constitute a mere service industry because they have small spillover effects on the industry as a whole. Since Myanmar lacks raw materials for garments for exports, design capability, sewing machines, and overseas marketing channels, the only way to export garments in the near future is exporting products made on commission using the country's inexpensive labor. Even in China, after the opening of its economy to the outside world in 1979, exports of items made on commission from Japanese enterprises were started at the beginning of the 1980s on a trial basis. Entries through exports of products sewn on commission were started in earnest in the second half of the 1980s. It was not until the second half of the 1990s that Chinese enterprises launched the so-called "develop and export scheme" in which they purchased fabrics on their own and developed their own overseas marketing channels. During these more than 15 years, Chinese enterprises did all they could to acquire skills, to grasp needs of the overseas markets, procure fabrics for garments for exports and improve design capability. Not only garment-manufacturing but all exports of items made on commission should be regarded as a process of technology transfer to Myanmar.

Another problem is excessive protection of workers by the government. Labor rules must be made clear and disclosed to enterprises before the Labor Bureau receives the signed labor contracts from them. Since the system to defend the employer is still inadequate, Myanmar should create an environment in which foreign companies can operate without worries by, for example, allowing the MIC to arbitrate with the Labor Bureau on behalf of MIC-approved foreign companies. In the main body of the report, we have analyzed in

considerable detail the development strategy for the garment-manufacturing industry and proposed an action plan.

b) Processed lumber (wood) products

The most serious problem for private-sector processors is the deterioration of the accuracy of processing resulting from the deterioration, aging and obsolescence of processing equipment due to the country's difficult foreign currency situation, which limits machinery imports. As a result, approximately 70% of timber exports are exported in the log, which barely creates value added. Logs are processed in Thailand, India, Malaysia and other countries before they are exported to Hong Kong, Japan and other Far Eastern countries and Western countries. This means that value added created by processing is earned by offshore processors of Myanmar's logs. As a result, in lumber trade with Malaysia, for example, Myanmar is a significant net exporter in logs and lumber, but is a net importer of processed lumber products. Since Myanmar will have to reduce import tariffs from the present 15% to 5% or lower by 2008 under AFTA rules, net imports of processed lumber products may increase further.

The policy to counter this will require a major reduction in exports of raw lumber of teak by the government and banning of such exports after a certain period, leasing of woods and forests to the private sector, lifting of the ban on the commission to the private sector of forest management, replacement of processing machines and improvement of processing technology with overseas assistance and the establishment of lumber processing training centers to switch lucrative offshore production to onshore production.

c) Footwear

The major feature of Myanmar's exports of footwear as of 2001 was that sales to Japan accounted for 77% of the total. As of December 2002, there were three private-sector businesses engaged in production on commission for exports (one 100% foreign-owned enterprise and two local enterprises), each employing more than 500 workers. There are also some 300 companies with less than 500 workers engaged in the production of shoes and sandals for the domestic market. In addition, there are some 500 household or family-owned enterprises with two to four employees manufacturing inexpensive sandals for the domestic market. Although the export market in Japan is still small, it is doubling each year, while the domestic market is growing at an annual rate of more than 10%. Thus the business environment is favorable.

There fewer problems and priorities for large private manufacturing firms engaged in production on commission for exports rather than are specific to the footwear industry. Our interview survey has found that the industry wanted deregulation of the use of the Internet to make up for the lack of information required to find overseas buyers, streamlining and speeding

up of export and import customs clearance because at present the approval process and inspections for customs clearance and various applications take many days, and the improvement of power and water supplies.

Policy needs include the establishment of joint product development centers in order to identify consumer needs and trends regarding colors and designs through the collection and analysis of information on products that are selling well in the domestic market, and the establishment of shared facilities (distribution centers and shared/joint cutting plants) so that very small manufacturers are able to jointly procure materials and sell their products. Required government support includes, for example, financial assistance for the establishment of the facilities proposed above and nurturing of technical and skilled workers. In the main body of this report, we have analyzed the development strategy for the garment-manufacturing industry in considerable detail and proposed an action plan.

2) Import-substitution type manufacturing industries

With the exception of the above-mentioned three export industries, most private manufacturing industries in Myanmar target the domestic market or partially target overseas markets. However, their competitiveness in the domestic market is weak due to problems in the levels of technology and product quality. Consequently, the government is imposing import regulations, such as high tariff rates, foreign exchange quotas, or the import permit system. At the same time, it is maintaining de facto a production system run by SOEs, centering on the textile, food processing and beverage, pharmaceutical, paper-making, machinery, automobile, fertilizer, electronics and electrical machinery industries in order to promote import-substitution. These SOEs should be purchasing parts or subcontract facility maintenance services to private enterprises and also procure equipment, software and engineering through competitive biddings that are also open to private enterprises.

The enhancement of the competitiveness of private enterprises that target the domestic market should be realized through the introduction of a policy that places emphasis on the market principle rather than through import regulations and an import-substitution policy by the government. It is necessary for the government to adopt a policy to increase productivity through the introduction of foreign technology and human resources development, create new businesses through the nurturing of entrepreneurial spirit, gradually privatize the three sectors (i.e,., postal services and telecommunications, broadcasting and television, and electric power) now monopolized by SOEs and increase their business efficiency through the entry of private enterprises.

3) Development of supporting industries

Although supporting industries in Myanmar have yet to be developed, there are buds of

processing and assembly technologies. They can be found in, for example the group of enterprises producing consumer goods (pots and pans, pipes, chair, shelves, knives, scissors, etc. which are made primarily by household or family-owned enterprises); the group of companies engaged in repairs (auto repairs, motorcycle repairs, machinery repairs, etc. which are now carried out primarily by household or family-owned enterprises); the group of companies engaged in machine assembly (lathes, boring machines, rice-milling machines, machines for making potato chips or other snack foods, ice cream cone machines, wafer-making machines, screw blades for boats, machines that weigh or cast anchors, cement machines, edible oil refining machines, textile machines, etc. which are made primarily by SOEs) and the group of import-substitution businesses which assemble imported parts (electrical machinery and electronic equipment and others which are made primarily by foreign or part-foreign companies).

The development of parts makers requires first of all the invitation of overseas experts to conduct education and training for making production plans for and production control of parts, implement factory diagnosis and give guidance. The next step is education and training to improve technology and product quality. In the medium term, it will be effective to open inspection centers. In order to develop the parts industry that will assemble parts on commission from foreign enterprises, it is important to develop metal processing (including metal molds), plastic molding (including metal molds), surface treatment, etc. in the case of, for example, electrical machinery and electronics industry. The development policy should consist of the invitation of foreign experts in the short term and in the medium term the development in stages of industrial standards and strengthening of the safety standards certification system.

4) Development of rural industries[8]

Rural industries are basically industries rooted in the region and exist to at least meet the regional demand. Most industries and enterprises ship surplus products to markets in other regions only to a limited extent. Consequently, the production value of rural industries is extremely small compared with the value of agricultural production in the same region, and the number of employees in these industries is small because most of these businesses are household or family-owned enterprises. However, since rural industries contribute to increasing regional income and jobs, it is necessary to achieve dual growth, in which industries in rural and provincial areas are developed simultaneously and in parallel with the development of the industry in urban areas aimed at job creation.

The following are summaries of needed policies based on industry characteristics.

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[8] The analysis of rural industries is based on Professor Kiryu's report.

- The maintenance and qualitative improvement of traditional industries: It is necessary to consider the ways of maintaining the technology and equipment for traditional arts and craft to pass them on to future generations. Effort should be made to improve product quality by comparing products with foreign products and introducing new technology.
- Promotion of the production of special local products: In order to increase jobs in local communities, the promotion of the production of special local products, including a "one-village, one-product" movement, should be considered.
- Nurturing of subcontracting industries: At present, there are not many subcontracting businesses of different types, but nurturing of subcontracting industries is important from the viewpoint of the development of rural industries. By nurturing packing, gem grinding, etc., skills should be developed so that in the future they can be used to develop businesses into subcontractors to large companies.
- Development of export industries: Food processing aside, the industries with large export potentials would be: among traditional products, Shan fabric, silk fabrics of Mandalay, wood carving, lacquer works, etc; and among processed agricultural products, feed, woodcraft, jute products, etc. However, since it will be difficult to promote exports of these products with the present quality and design, they need to be improved. It will also require the introduction of new equipment and technology as well as the cultivation of markets.

5) Promotion of joint ventures with foreign companies

In order to address the foreign exchange shortage, which is an urgent priority for the country, Myanmar must attract businesses that will contribute to increasing exports as much as possible. To this end, it must identify promising industries as priority targets to bring to the country and launch a campaign to attract them. The promotion of joint ventures with foreign companies that will engage in assembly or manufacturing of garments, wood processing and electronic parts by taking advantage of domestic resources and labor, which are the country's strengths, will benefit the nation. Rather than imposing disincentives on foreign companies, it is important to give them incentives. Furthermore, since the development of the agricultural and agro-industrial sectors is an important priority, it is essential to bring foreign direct investment from a long-term perspective in such areas as the development of agricultural products for exports and in the areas relating to chemical fertilizers, agricultural machinery and physical distribution. Many of such ventures are expected to take the joint venture format. Attracting foreign direct investment for the development of forestry and fisheries is also an urgent task and the discussion here is also intended for it.

5.1.5 Draft Proposal of SME Development Policy

It is important for Myanmar to adopt an SME development policy that matches the stages of development of the organizational format of businesses. As it was analyzed earlier in this paper, in Myanmar household or family-owned enterprises, personal-tie enterprises and capital-tie enterprises, each of which represent different stages of development, exist side by side. Nevertheless, the weight of household or family-owned enterprises is particularly high. In order to cover all enterprises in the three stages of development, short-, medium- and long-term policy systems are necessary. In the subsequent sections, we will discuss in some detail the examples of concrete measures which should be implemented in the short term. They include the re-definition of SMEs, the establishment of a government bureau specializing in SMEs development, measures for private company registrations, the enhancement of the functions of UMFCCI and human resources development, the setting-up of technology guidance centers in industrial zones, the introduction of a system for sale of government-owned machinery to the private sector, the creation of organizations for joint businesses, industrial land policies and SME financing policies.

Table 5-2 Major Policy Systems for SMEs Based on the Present Conditions in Myanmar

Areas of SME policy	Examples of SME policy	Degree of urgency for policy implementation (short-, medium- or long-term)
Statutes, organizations, systems	*Redefinition of SMEs *Enactment of SME laws *Establishment of SME Bureau *Creation of inter-ministry SME Council	*Short-term *Medium-term *Short-term *Medium-term
Nurturing of business associations	*Enhancement of the functions of UMFCCI *Strengthening of industry group network	*Short-term *Medium-term
Business consulting	*Strengthening of UMFCCI's management and technological guidance *SME diagnosis consultant system *Business diagnosis centers	*Short-term *Long-term *Medium-term
Building of linkage among firms	*Strengthening of primary contractor-subcontractor relations *Creation of organizations for joint business	*Medium-term *Short-term
Finance	(See SME financing)	*Short& Medium term
Human resources development	*HRD of UMFCCI staff members *Upgrading of UMFCCI programs for SMEs workers *Establishment of UMFCCI Advanced Management Program for SMEs directors	*Short-term *Short-term *Short-term
Technology and equipment	*Setting-up of technology guidance centers in industrial zones *Introduction of a system for the sale of state-owned machinery to the private sector *Enactment of Technology Development Law	*Short-term *Short-term *Medium-term
Marketing	*Creation of marketing centers for product development, quality control and improvement of packaging and packing *E-commerce by UMFCCI and business associations	*Medium-term *Long-term
Streamlining of administrative procedures	*Integration of approval/permit windows (opening of one-stop service centers) *Streamlining of administrative procedures, including registration of establishment and commercial registration *Streamlining and speeding up of export-import procedures	*Short-term *Short-term *Short-term
Location of industries	*Industrial site policy	*Short-term

Source: JICA Study Team.

(1) Re-Definition of SMEs

First, we will examine the definition of SMEs, which are the targets of the development policy. The existence of multiple criteria common to all industries (the number of employees, the capacity of power motor equipment, the amount of investment or the value of production) in Myanmar allows the use of different criteria even for the same industry. As a result, the number of SMEs varies depending on which criterion was used. This will present a problem in formulating SME policies by scale of business. In contemplating the use of one definition, since the amount of sales or production value fluctuates widely from year to year and the fluctuation in the operating rate affects the definition of SMEs, these are not appropriate criteria for the definition of SMEs.

Since most SMEs in Myanmar are in labor-intensive rather than capital-intensive industries, the number of employees is a realistic criterion, while capital-intensiveness criteria (power motor capacity and the amount of fixed assets) do not accurately reflect the actual conditions of SMEs. At the same time, since Myanmar has yet to establish fair and appropriate accounting practices, it is impossible to say that there is no doubt that accurate assessment of the total amount of assets is made. Moreover, since the total amount of assets is underestimated when an SME is leasing land from an SOE rather than using its own land, it is not possible to compare different businesses by using total assets as a criterion. Paid-in capital is registered in Myanmar as well. Since the paid-in capital rather than authorized capital, which may or may not be paid in, is registered, the amount of paid-in capital may be a reliable criterion. However, among private enterprises, it is not rare for a company to have paid-in capital that is smaller than the scale of operations. This is because of the following reasons: i) paid-in capital often represents the investment of the entire assets of the proprietor, who seldom makes capital increases after the payment of capital at the time of the founding of the business. As a result, the increase in capital may not be in proportion to the expansion of business; ii) since re-evaluation of fixed assets is not made even when prices rise, appraisal surplus, which is a part of capital, is not entered; and iii) since many of the companies are engaged in production on commission, the size of capital can vary depending on whether the proprietor has made investment in kind with land, buildings or sewing machines, or leasing these items from the client. Therefore, in Myanmar when the number of employees increases while capital remains constant, a wide gap can emerge between the two. That is, while the number of employees reflects the expansion of the business, the amount of paid-in capital does not necessarily do so.

Consequently, it seems appropriate to use the number of employees as the criterion and possibly add the fixed assets criterion based on the assumption that the accuracy of fixed assets appraisal can be ensured. However, it is not necessary to fix the definition on certain criterion for an indefinite period. When the use of other criteria becomes reasonable, they can be used

along with the number-of-employee criterion. Different criterion or criteria may be used in the non-manufacturing sector.

(2) Establishment of a government bureau specializing in SME development

In Myanmar, there is an on-going debate on whether or not it is necessary to create a ministry, an agency or a bureau, specializing in the development of SMEs or whether the problem should be addressed within the existing ministries or agencies instead of a special agency. Those who argue for the former say that it is necessary to adopt special incentives and create an agency for the development of SMEs, which are mostly private-sector enterprises. Those who argue for the latter say that at present there is the problem of level playing field (LPF) between SOEs and private enterprises, and in solving this problem, the creation of special incentives and special agency for the development of SMEs will create the problem of reverse-LPF, and therefore special incentives and agency are not necessary.

At present a great many government agencies are involved in SME affairs in one way or another. For example, the central bank is involved in financing; the Ministries of Industry No.1 and No.2, the Ministry of Science and Technology and the Ministry of Co-operative Limited in technology and production; and the Ministry of Commerce in trade. Since the situation in which each ministry has independent authority and requires separate permit and approval procedures is very inconvenient for SMEs, one-stop windows are necessary. One practical step would be to promote the SME Unit in the Ministry of Industry No.2 to a section, create an SME Development Committee across the borders between different ministries and use the newly created SME Section as its secretariat. In the future, the creation of an SME development bureau is a possibility as a concept, but before it is carried out, it would be necessary to unify SME administration, which is being carried out by a number of ministries. Although it is also necessary to create SME support organizations in the central and local governments and financial institutions, no matter how good these institutions are, Myanmar does not have enough human resources to manage them. Therefore, in the near future, focus should be placed on human resources development chiefly by universities, UMFCCI and the business associations under its umbrella.

(3) Private company registration

The present registration system at the time of the establishment of an enterprise is a de facto approval system and is very time-consuming. The problem with the permit and approval system is that it expands the scope of discretion of bureaucrats and can cause delays in approvals or become the hotbed of corruption. The registration of private enterprises requires more documents and more permits and approvals than the establishment of co-operative limited or joint ventures between foreign companies and SOEs requires, and is very cumbersome.

Moreover, even in sectors in which private enterprises are required to register, SOEs are legally exempted from this requirement, which means that there is no level playing field. Although the present company registration system is in principle under the jurisdiction of the Ministry of National Planning and Economic Development, it is not necessarily uniform across the nation, and various ministries require different registrations for different industries and types of businesses. In order to assure speedy market transactions, a uniform company registration system needs to be established.

(4) Enhancement of the functions of UMFCCI and human resources development

1) Human resources development for the staff members of UMFCCI (Secretariat)

Without improving the management efficiency of UMFCCI and enhancing its services to its members, it is impossible to enhance the members' trust in the organization. Two perspectives are necessary for the human resources development of UMFCCI staff members. One is the development of the capabilities of the staff members themselves so that they can efficiently manage the organization of UMFCCI. Specifically, it involves training concerning the promotion of the use of information (top-down communication of policy information, bottom-up communication of member needs and requests, business matching among members, etc.), promotion of inter-industry exchange, management and clerical work of the organization (systemization of membership management, including soliciting new members, setting of admission and membership fees and the method of fee collection). The other is the development of the staff members' capability in providing management guidance to private enterprises. Therefore, human resources development for FMCCI would require the development of capability to fully grasp the needs of its members and disseminate fresh knowledge about management. Specifically, staff capabilities should be enhanced in the method of identifying members' needs (techniques for analyzing questionnaires, opinions and requests), "planning and management" of membership training (methods of program development, instructor selection and teaching material development), renewal of the content of information magazines, product liability law, ISO9000, quality control and legal matters.

2) Proposal for the creation and management of "UMFCCI Advanced Management Program"

While Yangon University has an MBA program for young people, there is no practical, strategic and theoretical advanced management program for business executives in Myanmar. The following proposal is made for the creation and management of an advanced management program primarily for member companies of UMFCCI, which aims at strengthening the competitiveness of member firms in the long run.

a) Objective: The objective of the creation and management of "UMFCCI Advanced Management Program" is to help senior executives of member firms of UMFCCI develop the capability to make corporate-wide strategic decisions that can meet the demands of dramatically changing business environment. The education of senior executives is expected to help raise the level of business management and globalization of business management to enable them to respond to the transition of the economy into a market economy, and thus contribute to the development of the private sector.

b) Characteristics: The MBA programs in business schools in the advanced, industrialized countries are known for their aim of providing practical education. Therefore, "UMFCCI Advanced Management Program" will apply the programs in these countries to senior executives of Myanmar's enterprises and be at the forefront in terms of being practical, strategic and theoretical. By building an efficient management and operation system, it will focus on developing problem-solving capability and business-creation capability of participants through brain-brainstorming under experienced instructors primarily based on case studies.

Table 5-3 Difference between Advanced Management Program and Existing Education

Content of education	Basic knowledge and theory	Advanced theory and application of theory	Practical knowledge and analysis	Fusion of theory and practice, development of strategic decision-making ability
<Institution>	University (undergraduate)	Graduate school (MBA)	In-company training	Advanced Management Program
<Targets>				
Corporate senior executives				
Corporate middle managers				
Corporate junior employees				
Graduate students				
Undergraduates				

Source: JICA Study Team

c) Instructors: The Advanced Management Program will invite the top-class professors, researchers, consultants and businessmen in each discipline to provide creative management

education based primarily on case studies.

d) Targets: Since the aim of the program is to develop strategic thinking and judgment capabilities of senior managers, it is for senior executives of member companies. As such, it will consist primarily of senior management education and will not include education of blue-collar workers in order to make the program more effective. The condition for enrollment is that a candidate has the willingness and passion to analyze the case materials distributed ahead of classes before engaging in active discussion between the instructor and students and among the students.

(5) Setting-up of technology guidance centers in industrial zones

We propose the establishment of technical centers in industrial zones to offer technological information, provide consulting and guidance on technological matters as well as technical training to company employees. Partly because it is not easy for people in Myanmar to go abroad, there is an absolute shortage of overseas technological information. There is even a shortage of the kind of basic technological information which is common knowledge in other countries. It is the responsibility of the government policy rather than business managers to close this gap in the availability of basic technological information. It is also necessary to provide support when companies develop their proprietary technology that is beyond the basic technology. Most SMEs are unable to own in-house expensive measuring instruments or other equipment that are required for the development of technology. Since SMEs in Myanmar are more labor-intensive that those in other countries, the levels of technology and knowledge of individual workers greatly affect the quality of products. It is necessary to provide technical training programs for employees that match the needs of private enterprises in order to raise the minimum level of technology of businesses. Specifically, the following measures will the needed.

a) Location: Technical training centers should be established in each industrial zone to facilitate its use by businesses and to offer knowledge that matches the characteristics of local industries. The near-term goals should be to establish them in two or three industrial zones.

b) Management entity: A management committee comprising businesses in the industrial zone should be established to plan and manage the contents of the center's activities.

c) Outline of activities: Concrete contents of the activities are to be planned by the management committee as proposed above, but they should have the following two pillars: One is

technological guidance to managers and the other is technical training for workers.

(Technological guidance for managers)

- Offer technological information: Offer information on machinery and equipment, materials, production control, etc. for each of the major industries, including food processing, textiles, general machinery, electric and electronics and metals. Special emphasis should also be placed on offering overseas information, which is in short supply. It is desirable to include in overseas information inventory information on used machinery in Japan. The centers should also collect video tapes in addition to books and magazines. They should also refer businessmen to information sources.

- Technological consulting: This program should offer consulting on the causes of problems and problems in technology development and offer solutions. It should also accept consulting for systematizing and making manuals for technology.

- Testing on request: Upon request from businesses, the centers will conduct testing, measurement, analysis, etc. of products, parts and materials and issue reports or certificates on test results. Such papers will increase the reliability of products and may help find new trading partners.

- Access to equipment: Testing equipment should be accessible to businesses so that companies that do not own testing equipment can use them for making trial models, measurement, analysis, etc.

- On-site visits: Staff members of the centers should make on-site visits to factories and offer on-site guidance.

- Exchange among businesses: Information exchange among businesses should supplement technological information.

(Technical training for employees)

The system should be designed so that company employees can study while working and can receive necessary technical training. One way to achieve these objectives would be to conduct a series of short programs on different themes and allow businesses to select the courses.

For example, the following curricula are possible for technical training in the mechanical area.

- Processing techniques: Cutting, grinding, welding
- Measuring and testing: Measuring techniques, testing techniques
- Designing techniques: machinery designing, hydraulic and air pressure circuits

For example, the above programs can be rotated so that each program is conducted about once a month for approximately 10 days so that businesses can select the programs they need and send their employees. This will allow one employee to finish all of these programs in three months.

(6) Introduction of a system for selling state-owned machinery to the private sector

As a means of modernizing the equipment of private enterprises and making effective use of machinery used by SOEs, we propose the creation of a system under which machinery no longer in use at SOEs will be sold to private enterprises. Our interview survey has revealed that a large number of small and medium-sized manufactures wish to replace their machinery but they do not necessarily want the most up-to-date machinery. Not a few of them will be happy to use used machinery if they are inexpensive and easy to use. Thus, the creation of a system to sell on request the machinery made redundant due to equipment replacement at SOEs to SMEs and very small enterprises which will be happy with used machinery is desirable both for making effective use of the equipment and saving the acquisition cost of private enterprises. However, we need to exercise caution since we cannot say that there are no technically gray areas concerning the assessment of the value of the machinery and the cost of moving it, or that there is no possibility of arbitrary decisions by the persons in charge with respect to the method and timing of moving the machines. The major points to be noted are as follows.

a) In creating the system, the relevant ministry should keep the following in mind:

- The relevant ministry should set rules for sales (frequency of sales, methods of announcing the auctions, qualifications and other conditions required of the possible purchasers, penalties for violation of the rules, etc.) and make them public.
- The relevant ministry should collect information on machinery to be sold from each SOE and make all information public according to the rules.
- The result of the sales should be made public without delay.
- The rules of resolution of disputes should be set in advance.

b) In order to participate in the above system, SOEs should make the following provisions in advance. Each SOE should have detailed rules concerning the disposal of machinery it no longer needs (sell, abandon, divert, etc.)

- Clerical procedures for sales should be determined in advance and a manual covering the assessment method for the equipment, the process of sales, the section which is responsible for the clerical work, etc. should be prepared.
- Establish a system for regular inspections to see if disposal of machinery is appropriate.

c) Points to be kept in mind in the management of the sales system

- Avoid as much as possible the concentration of enterprises benefiting from the sales to particular sectors, regions, etc.
- Make clear and transparent the process of and reasons for the decision-making regarding sales.
- The sales price must be appropriate so that it can be accounted for to any third party.
- Create a system which makes sure that the successful bidder use the machine in-house and bans re-sale of the equipment for a certain period.
- The efficiency (performance), attributes, problems, etc. of the machinery must be accurately disclosed and shown on the label.
- As in ordinary transactions, the rights and obligations of the seller and buyer must be clearly defined.

(7) Creation of organizations for joint businesses

For SMEs to compete successfully against large SOEs and foreign companies, they must overcome their disadvantages, such as their small size, low technological capability and low creditworthiness. Banding them together, including the creation of co-operative businesses is an important means of achieving this objective. Today, business associations basically do not engage in co-operative business. Recently, however, there has been a growing trend to cooperate with other businesses in the areas other than their core business, because SMEs usually specialize in their core competency. If co-operative business among enterprises that can complement one another can be promoted, the competitiveness of the whole can be expected to increase. In case flexible management of the present Co-operative Limited Law proves to be difficult, its revision should be included among the possibilities. Since the Ministry of Co-operative Limited has jurisdiction over activities to promote co-operative businesses, the following proposal is presented to the Ministry concerning a policy for the promotion of co-operative businesses that will allow the participation of not only very small but also medium-sized establishments.

a) System for information exchange and linkage

We believe this system should be managed jointly by the Ministry of Industry No.1 and the Ministry of Co-operative Limited. The latter should accumulate information on the activities of co-operative businesses, and technology and business operations from across the country and offer it to SMEs based on certain rules. Would-be recipients of such information should not be limited to business proprietors and co-operative limited registered with the Ministry of Co-operative Limited. Concrete management of the system is as follows:

- Prepare a mapping of products made by SMEs that are engaged in co-operative business. By introducing relevant business entities to other businesses to encourage participation in co-operative businesses, it can support the members' efforts to improve product quality and production technology through mutual cooperation.

b) Commendation system for co-operative businesses

The Ministry of Industry No.1 and the Ministry of Co-operative Limited will jointly introduce a commendation system for successful business entities to introduce successful examples. Successful examples sought by the system will be as follows. However, measures should be taken to protect intellectual property rights, so that the business entities that provide information on activities, technology and business operations will not be adversely affected by such disclosure.

- Business entities that have performed well by using the information on activities of co-operative businesses or technology and business operations provided by the Ministry of Co-operative Limited
- Business entities that have dramatically improved product quality or reduced cost by using the parts supplied by other co-operative business entities.

c) Technological innovation and business start-up seminars

In order to encourage co-operative business activities, the relevant ministries should actively hold seminars for technological innovation and the creation of new firms or the development of new businesses to support co-operative businesses. Not only the enterprises registered with the Ministry of Co-operative Limited but also those under the jurisdiction of the Ministry of Industry No.1 should be encouraged to participate. It is desirable to hold these seminars in each province or administrative division to reflect local conditions. These seminars need wide support as joint undertaking of the central

government, including the Ministry of Co-operative Limited and the Ministry of Industry No.1, and provincial governments.

(8) Industrial land policies

Local small and medium-sized manufacturing enterprises can obtain industrial land in or outside of industrial zones. However, it is difficult to obtain land outside of industrial zones for the following reasons: i) land prices are high, ii) a tax equivalent to up to 50% of the acquisition price is imposed, iii) consent by seven neighbors is required, and iv) there are shortages of electric power and water supply /sewerage. Consequently, the usual practice is to acquire land in industrial zones. The development of industrial zones is primarily under the jurisdiction of chiefly Human Settlement and Housing Development (DHSHD) under the umbrella of the Ministry of Construction. The problem in obtaining land in industrial zones is that except for the sales campaign period, the actual price paid usually includes a premium of 50-300% of the official price depending on the location of the industrial zone, making it impossible for SMEs to afford it. The high actual cost is due to the addition of brokerage fees, donations to DHSHD staff members and mark-ups by large companies that purchase land for resale. Some large companies buy up plots in industrial zones in convenient locations, claiming they plan to engage in manufacturing. Not infrequently, however, their purchases are for capital gains through resale rather than for them to engage in manufacturing. This makes it very difficult for SMEs to acquire land in industrial zones. Under these circumstances, we make the following two proposals:

First, we propose that in order to grasp these conditions, the government needs to conduct a fact-finding survey consisting of the following questions.

- What is the percentage of enterprises that have purchased a plot in an industrial zone directly from the developer and using it for manufacturing operations? What is the breakdown by industry of such enterprises? How much did they pay for the plot?
- What is the percentage of enterprises operating in industrial zones that have purchased the plot through a broker? What is the breakdown by industry of such enterprises? How much did they pay for the plot?
- What is the percentage of enterprises operating in industrial zones that have purchased the plot through large companies that have bought up the plots in these zones? What is the breakdown by industry of such enterprises? How much did they pay for the plot?
- What is the percentage of plots which have been bought but which remain untouched? When were they bought? What is the percentage of plots on which the construction of factories is planned? What is the percentage of plots for which there are no plans for the construction of plants?

- What is the percentage of enterprises that have plans to build factories in industrial zones but which have yet to purchase sites in them or which have applied for the purchase of sites but have not won in the lottery?
- How many companies have bought more than one plot in industrial zones? Are these companies actually operating in more than one site?

Second, industrial zones exclusively for SMEs should be under the jurisdiction of a government department for SME promotion. When such department is created in the future, it must make sure that plots in industrial zones are allocated at reasonable prices to SMEs which really need them.

Although 100% foreign-capital firms are not allowed to purchase land, they are allowed to lease it. Joint ventures are allowed to acquire land, but such land is treated as investment in kind by the Myanmar partner. Joint ventures with private enterprises can lease land and buildings from the private sector, but since leasing agreements for periods longer than one year are not allowed, they have to go through the trouble of renewing the agreement annually. Joint ventures with SOEs are often forced to lease land and buildings for periods of 10 to 30 years at high rent. Long-term agreements at reasonable rent are desired.

(9) SME financing policies

Our proposal for SME financing policy will be discussed in detail in the next section. Short- and medium-term policy items include the following: i) setting of explicit lending policy by the government and financial authorities, ii) increasing the flexibility of assessment rate of collateral, iii) education of bank employees in modern lending theories and practices, iv) strengthening the functions of business associations that act as a conduit between SMEs and financial institutions, v) promotion of the leasing industry, vi) phased removal of interest rate ceilings, and vi) nurturing of venture capital funds.

5.2 A Summary of Policy for SME Financing

5.2.1 Present Status of Fund-raising by SMEs

(1) Hypothesis and methodology of analysis

1) Downward revision of the definition of small enterprises

It has been stated that in Myanmar multiple criteria (the number of employees, the capacity of power equipment, the amount of investment and the value of production) common to all industries are used for the definition of SMEs. According to the number-of-employees

criterion, small enterprises are defined as those having less than 50 employees, medium-sized enterprises as those having 50 to 99 employees and large enterprises those having 100 or more employees. In discussing the problems and priorities in SME financing and making proposals, we feel that the criterion of less than 50 employees is rather too broad for small enterprises. In our questionnaire survey, we classified enterprises into five groups: those with less than 10 employees, those with 10-19 employees, those with 20-49 employees, those with 50-99 employees and those with 100 or more employees. We have found that enterprises with less than 20 employees tended to largely depend on own capital. Therefore, in analyzing SME financing in Myanmar in this section, we will redefine small enterprises as those having less than 20 employees, medium-sized enterprises as those with 20-99 employees and large enterprises as those with 100 or more employees.

2) Execution of an additional survey through interviews and questionnaires covering 200 companies

No statistics or surveys are available on the present condition of SME financing. Moreover, since our questionnaire survey covering approximately 690 private enterprises included only six or seven questions regarding fund-raising, it was impossible to make a detailed analysis. Therefore, we conducted an additional questionnaire survey in the second half of 2002 covering 200 companies. The number of questions on fund-raising was increased to 28 in the new questionnaire. The composition of the 200 companies was 51% small enterprises, 32% medium-sized enterprises and 17% large enterprises.

(2) Results of analysis

1) Trend of fund-raising by small enterprises

a) Small enterprises tend to operate with 100% equity by obtaining funds from relatives or business partners. This is because they do not want to share profits with other people or pay interest. As a result, 84% of small enterprises were operated with 100% equity. Only 16% of these firms raised funds through borrowing.

b) Among the small enterprises operating with 100% equity, 72% exclusively depended on their own capital, while 9% obtained equity from relatives, 14% from friends, and 5% from both relatives and friends.

c) Among the small enterprises which raised funds through borrowing, 35% borrowed from banks, while the remaining 65% borrowed from relatives and friends (20%), business

partners (40%) or informal financial organizations (5%). Borrowing from relatives, friends or through other personal ties often did not require collateral since it was made on the basis of trust.

d) In Myanmar, those raising funds through financial institutions are predominantly medium-sized or large enterprises. The reasons that 65% of small enterprises did not borrow from formal financial institutions were that they did not have enough collateral, they had not prepared appropriate financial statements and/or their business performance was not good enough.

2) Trend of fund-raising by medium-sized enterprises

a) Sixty-seven percent of medium-sized enterprises were operating with 100% equity, while 33% raised funds through borrowing. The percentage of medium-sized companies that borrowed was higher than that of small enterprises.

b) Among the medium-sized enterprises that raised funds through borrowing, 43% borrowed from banks. Again the ratio was higher for medium-sized enterprises than for small enterprises. The remaining 67% of small enterprises (57%) borrowed from relatives and friends (28%), business partners (22%) or informal financial organizations (7%).

3) Trend of fund-raising by large enterprises

a) Ten percent of large enterprises were operating with 100% equity, while a high 90% borrowed to raise funds. The percentage of companies that borrowed was very high.

b) Among the enterprises that borrowed, 90% borrowed from banks. The rate of those that depended on bank financing was higher than that of SMEs.

5.2.2 Funds Supply to SMEs

(1) Methodology of analysis

As of 2002, in Myanmar there were 20 private or semi-private banks that were extending credit to private enterprises, including SMEs. Since no statistics are available that help grasp the present condition of funds supply to SMEs, we have analyzed the annual report of each financing institution that shows lending to private enterprises and interviewed banks, including the central bank.

(2) Results of analysis

1) Central bank's lending policy toward private enterprises

In order to promote the development of private manufacturing industries, the central bank of Myanmar has issued a number of directives to private financial institutions. Such directives include the following:

a) In September 1999, the central bank directed that when private banks lend funds to private enterprises operating in industrial zones, the ceiling for lending rates should be an annual rate of 15% from October 1999 onward. It also directed to the private banks that when they renew lending to enterprises engaged in the manufacturing of agricultural machinery, industrial machinery, import-substitution products or some other activities, the lending rates should be capped at an annual rate of 15% from October 1999 and onward. It also directed that the amount of credit should be equivalent to 50% of the value of the collateral.

b) In March 2000, the central bank directed the private banks to set the ceiling of annual rate of 13% from April 2000 onward when they lend to enterprises operating in industrial zones or to agricultural projects. It also directed that centering on lending to enterprises engaged in the manufacturing of agricultural machinery, industrial machinery or import-substitution products, the rate on the renewal of credit should not exceed an annual rate of 13% from April 2000 onward. It instructed that in such cases, lending should be equivalent to 50% of the value of the collateral.

Although the central bank has adopted the above policies, we cannot say that it is making enough efforts to help SMEs raise funds.

2) Trend of bank lending to private enterprises and SMEs

a) Bank lending to private enterprises increased 65% year-on-year in fiscal 1999/2000 and 77% year-on-year in fiscal 2000/2001. However, the ratio of lending to deposits declined from 65% in fiscal 1998/1999 to 56% in fiscal 1999/2000, though it rebounded somewhat to 59% in fiscal 2000/2001. Due to the very cautious lending stance of Myanmar's banks, the percentage of deposits that were not used for lending exceeded 40% in these three years. This means that increasing funds demand of private enterprises is not being met adequately.

b) It is estimated that small enterprises account for 13% of bank lending, while medium-sized

enterprises account for 23%. Although total bank lending to private enterprises increased 77% year-on-year in fiscal 2000/2001, lending to SMEs increased by only 15% in the same year.

c) A breakdown of bank lending by industry shows that as of September 2001, private trading companies accounted for 48%, or the largest share, followed by private manufacturing enterprises, which accounted for 27%. Trading companies are given preference because they can offer their highly liquid inventories as collateral.

d) Since SMEs account for 36% of total lending to private manufacturing enterprises, it is estimated that SMEs in the manufacturing sector account for only 9.7% of total bank lending to private manufacturing enterprises.

3) Trend of leasing to SMEs

a) The only industrial leasing company in Myanmar is Oriental Lease, which has just started operations. The financial market in Myanmar lacked the leasing sector for a long time. The first company to introduce leasing was Yoma Bank, which introduced the rental-purchase system, but initially this was primarily for the rental of automobiles made by Daewoo or Suzuki. This was followed by a large number of banks that introduced leasing of rental property, but Oriental Lease was the first to lease industrial machines. The company, which was founded in January 1995, is a subsidiary of Myanmar Oriental Bank, a private bank. SMEs and individuals are now able to lease household items, machinery, automobiles and motorcycles through Oriental Lease.

b) The amount of leasing by Oriental Lease increased 143% between 1998 and 1999. Leasing to SMEs in the manufacturing sector accounted for 11% in 1998 and 12%, and the rate of increase in the amount of leasing was a high 167%. The reason that leasing to SMEs increased sharply was that it takes only about one week, a very short time, to receive leasing. Many SMEs have become aware of the speed and convenience of leasing as a means of raising funds for the purchase of machinery.

4) Trend of lending to SMEs by small financing institutions, including pawnshops

a) Myanma Small Loans Enterprise (MSLE) was originally founded as a state-run pawnshop in 1952. It was reorganized in August 1992 to provide small financing to SMEs and individuals who have collateral. Before 1998, it accepted various items, such as gold,

bicycles, watches and electronic products, as collateral, but since 1998 it has accepted only gold as collateral. It lends amounts equivalent to 90% of the value of gold offered as collateral at an annual interest rate of 36%. The high lending rate is accepted , because lending procedures at MSLE are simpler than those required by private banks. MSLE's profits and lending to SMEs have been increasing from year to year.

b) In Myanmar there are around 96 licensed private pawnshops. Approximately 50% of their lending is thought to be directed to personal enterprises. Private pawnshops often charge interest of more than 36% per year, depending on the quality and type of collateral. Our interviews with these shops have revealed that while the amount of total lending has been growing from year to year, the ratio of individuals has been increase since the amounts of individual loans were small. It is expected that in the future, private pawnshops will grow as personal finance companies rather than providers of loans to SMEs.

5) Trend of lending to SMEs by informal financial organizations

a) The major informal financial organizations are fund management companies and financial brokers.

b) Fund management companies are those that raise funds from the public at an interest rate of 3.5% per month under one-year contracts to lend to SMEs and other borrowers. The minimum amount of their loans is relatively large at 500,000 kyats. They require no collateral and their lending procedures are very quick. However, since lending rates are usually high at 3-4.5% per month for lending of up to three months, 3.5-5% per month for lending of up to six months and 5-6% per month for lending of up to one year, many fund management companies are engaged in or are making investment and loans to high risk, high return speculative ventures unrelated to the manufacturing industry. Fund management companies grew through the middle of 2002 and the combined amount of their funds was estimated at equivalent to one-quarter of the market for formal financial institutions. However, the funds of fund management companies have been declining since the middle of 2002, when the financial authorities issued a directive that they would regulate informal financial organizations.

c) Financial brokers act as intermediaries between business proprietors requiring funds and third parties that have surplus funds. There are no rules and regulations concerning financial brokers and their market is small. Based on the agreement with the borrower, financial brokers sell the collateral offered by the borrower to third parties who have

surplus funds. Compared with banks, their lending procedures are far speedier and their assessment rates of collateral are higher. Collateral are usually gold, automobiles or land. Lending rates depend on the sales value of the collateral and range from a monthly rate of 4% for gold to 6% for land and other real estate and 6-10% for automobiles. This means that annual interest rates range from 48% to 120%. However, activities of financial brokers have slowed down since the middle of 2002, when the financial authorities floated a directive that it would regulate informal financial organizations.

6) Macro policy issues concerning SME financing

a) A major macro policy issue concerning SME financing is interest rate control, or setting deposit rates so low that real interest rates would be negative. However, despite the fact that real interest rates were negative, bank deposit increased between 1999 and 2001. This is attributable to two factors. One is that most depositors put their money in the bank for convenience in trading rather than for interest income. In Myanmar as well, cash transactions are a thing of the past in commercial practices. Today, a majority of transactions are settled via banks through account transfers or by checks. It was already discussed that the increase in deposits was not used for lending to SMEs. The other is that at the middle of 2002, the government began to regulate lending by high risk, high return fund managing companies and financial brokers, which until then had been unregulated. This has sharply constrained the market where surplus funds of businesses were invested, resulting in inflows of surplus funds into low risk, low return bank deposits in spite of the fact that they paid only negative interest. Because of this contraction of informal financial organizations before the improvement of availability of formal financing for SMEs, some SMEs with active funds demand have been experiencing difficulties in fund-raising.

b) As tools of interest rate control, Myanmar is capping nominal deposit rates and nominal lending rates. The objective of interest rate control is to encourage investment. If lending rates are kept at low levels thanks to low deposit rates, the number of projects whose net present value discounted at relevant interest rates is larger than the amount of investment will increase. However, setting a ceiling for interest rates can cause a tight funds demand-supply balance by encouraging investment in projects with low return on investment. At present, in fact, priority is given to financing to large enterprises which have superior collateral and guarantee capabilities even if their return on investment is low, while SMEs which lack collateral and guarantee capabilities are denied credit even if their return on investment is high.

5.2.3 Proposal of an Action Plan for Improving SME Financing

Based on the analyses presented so far, this summary will present priority proposals as follows. All of these proposals are to be implemented in the short to medium term.

a) [The government and the financial authorities should set clear and explicit lending policies]: The government and the financial authorities need to classify enterprises by industry and by the scale of enterprises to forecast their funds demand and set clear and explicit lending policies. Such classification is important in evaluating the borrowing sectors by industry and by the scale of enterprises, and determining the order of priority of each sector. If the government and the financial authorities can establish lending policies for each industry and scale of enterprises, they can direct financial institutions to make priority lending to the major industries and SMEs that play important roles in the nation's economic development.

b) [Adopt flexible assessment rates of collateral]: As discussed earlier, the central bank has directed the financial institutions to lend amounts which are equivalent to 50% of the value of collateral to enterprises operating in industrial zones. However, the amount of lending should not be determined in such a rigid manner. The amount of lending should be determined by future cash flows of private enterprises in addition to the quality of collateral. Thus, it is not appropriate for the central bank to make a regulatory intervention as described above.

c) [Educate bank employees in modern lending theories and practices]: Collateral is given the greatest importance in lending decisions because of the facts that financial statements of SMEs do not always accurately reflect the actual condition of the business and that many banks do not have enough expertise to evaluate the future potential of businesses through industrial analysis, financial analysis and other techniques. The assessment rate of collateral is high for gold, against which one can borrow amounts equivalent to approximately 90% of the assessment rate. As many people in Myanmar have a mistaken notion that gold price will continue to increase over an extended period of time, some speculators use gold as collateral to borrow from the banks and use the funds to purchase more gold. The overconfidence concerning gold is resulting in unsound lending practices. The assessment rates of other possible collateral are 90% for time deposits, approximately 50% to 30% for real estate and approximately 40% to 30% for jewelry. If the collateral is an asset with low liquidity, it must be worth at least two to three times the amount of desired lending. Therefore, it is necessary to implement educational programs to educate bank

employees in a modern lending theory that credit examination should not depend solely on the value of collateral. Specifically, such programs should help bank employees understand how financial support for the founding of promising private manufacturing enterprises will contribute to the development of the national economy and teach them the methodology of making credit decision based on not only the value of collateral but also future cash flows of the business, evaluating the feasibility studies of projects undertaken by SMEs, and so on.

d) [Enhance the functions of business associations that will serve as conduits between SMEs and financial institutions]: It is important to enhance the functions of business associations that will serve as conduits between SMEs and formal financial institutions. In turn, it is important for business associations to enhance their educational functions for educating SMEs in making business plans and feasibility studies. If education of SMEs by business associations enables SMEs prepare appropriate and truthful business plans and financial statements, it would increase the trust of banks in SMEs and banks are expected to direct more funds to promising SMEs. In addition to the enhancement of their educational functions, if business associations can enhance their research, analysis and consulting services that are helpful in providing financial support to SMEs, it would enable them to advise their evaluation of businesses as a criterion for credit decisions to the credit department of banks. The system for the enhancement of the functions of business associations should allow the participation of foreign experts, so that experiences in other countries can be shared with business associations and SMEs in Myanmar on a continuing basis.

e) [Development of the leasing industry]: By recognizing the leasing industry as a means of developing SME financing in a short period of time, the following measures should be taken: First, in order to make the payment of leasing charges more flexible and easy for the borrowers, monthly payments should be limited to interest while the repayment of the principal should be postponed to after the expiration of the contract period. Second, the period of leasing to SMEs in the manufacturing sector needs to be extended to two to three years from the present one year. Third, the present down payment of 30% of the value of the item leased should be reduced to, for example, around 10%. Fourth, while there is at present only one leasing company in Myanmar, the establishment of more leasing companies should be encouraged.

f) [Phased removal of interest rate caps]: It has been pointed out that there are caps on nominal deposit rates and nominal lending rates as a means of interest rate control. Such

caps should be removed in stages, so that the number of projects whose present net value discounted by the relevant interest rate exceeds the amount of investment will not increase owing to low lending rates resulting from low deposit rates. The phased removal of interest rate caps will encourage investment in projects with high return on investment and promote lending to SMEs with high return on investment even if they may be lacking in collateral and guarantee capabilities.

g) [Development of venture capital funds]: At present, banks seldom make long-term lending of three years or more. Therefore, until such time as when the stock and bond markets will have developed, it is necessary to develop venture capital funds as a market in which SMEs can raise long-term funds.

Chapter 6

Analysis of Location of Industries and Infrastructure

6. Analysis of Location of Industries and Infrastructure

6.1 The Myanmar Economy and the Need for Urgent Reform of Myanmar's Industrial Infrastructure

We are in a time of global mega-competition, when globalization and market economics are spreading rapidly. Unable to make the transition from a socialist economic structure to a market economy, however, the Myanmar economy lags far behind the rest of Asia. In order to develop economically, Myanmar urgently needs to embark on structural economic reforms and develop its industrial infrastructure. Myanmar has not invested properly in infrastructure for over half a century, and almost the entire infrastructure sector is insufficient for industrialization. The level of infrastructure per capita is only one twentieth that of ASEAN countries, and there is a particularly chronic shortage of electricity, with power stoppages almost constant. This severely adversely affects not only manufacturing, but also the economy as a whole.

The Myanmar economy and the industrial infrastructure sector are in a vicious cycle, and the cycle is worsening. The main features of this vicious cycle are as follows:

- Severe infrastructure shortages (especially of electricity and gas) creating a bottleneck impeding the economy as a whole.
- The Myanmar economy faces numerous problems in almost all sectors, not the least of which is an extreme shortage of foreign currency. Frequent changes to import and export regulations further damage the economy.
- Structural economic reforms including trade deregulation, unification of multiple exchange rates, privatization of state-owned enterprises (SOEs), reform of the land system, and reform of the foreign investment system will ultimately need to be implemented. However, the experience of China and other Asian countries indicates that such structural economic reforms require time. Unless Myanmar, which faces a severe shortage of foreign currency, can quickly implement plans requiring only a small investment outlay to generate foreign currency, the economy could collapse, leading to social unrest.
- Myanmar therefore needs an urgent plan to earn foreign currency in order to escape from this vicious cycle.
- Myanmar needs to adopt a strategy of medium/long-term economic reform in combination with urgent measures for progressive implementation beginning with those fields where implementation is feasible.

In order to escape this severe economic cycle, Myanmar needs to give priority to urgent measures pursued in parallel with medium-term structural reforms in order to achieve a radical solution to its problems. Below we put forward two proposals for urgent measures ((1) an urgent plan for the development of special economic zones, and (2) an urgent electricity supply plan), and four proposals for medium and long-term structural reform ((1) market pricing of infrastructure charges, (2) privatization of SOEs in the infrastructure sector, (3) a transition from centralized management to localized management, and (4) elimination of the present ad hoc approach to planning and adjustment).

Our concrete proposals for medium/long-term industry location and infrastructure development consist of (1) a method that enables the rapid and efficient development of infrastructure while keeping down investment costs by focusing on the development of infrastructure in and around 40 "Myanmar Economic Zones" (MEZs), and (2) the priority development in collaboration with neighboring countries of international corridor projects taking maximum advantage of Myanmar's strategic location between ASEAN, China and India.

Figure 6-1 Proposal on Industry location and Infrastructure Sector (Urgent and Medium/Long-Term)

1. Urgent measures (2003-4)
   (1) Urgent MEZ development plan: Reform of two or three existing industrial zones to create internationally attractive special economic zones (called Myanmar Economic Zones (MEZs) in Myanmar) (in 1-2 years)
   (2) Urgent electricity supply plan (to solve shortages in a target of 1-3 years)
      1) Supply of electricity to MEZs
      2) Urgent projects to provide supplies to other regions (government/private sector BOO/BOT projects)
      3) Urgent gas pipeline construction projects (couple of project)
      4) Acceleration of construction of hydroelectric power plants (couple of plants)
      5) Project to repair and upgrade existing power plant with Japanese aid provided by JICA

2. Proposal for medium/long-term structural reform of industry location and infrastructure development
   (1) Market pricing of infrastructure charges (halt of stem flow of red ink)
   (2) Switch from monopolistic SOE approach to privatization (progressive privatization starting with sectors where privatization is feasible)
   (3) Move away from centralized, generalized management toward management by specialists based on transfer of authority to those on the ground.
   (4) Move away from present ad hoc approach to planning and adjustment to system of planning and adjustment of industry location and infrastructure to enable balanced development of each sector and region.

3. Proposal on medium/long-term industry location and infrastructure development projects
   (1) Establishment of 40 MEZs throughout Myanmar and concentration of infrastructure development on development of MEZs
   (2) Active participation in international corridor projects linking ASEAN, China and West Asia (Asian Highway, railways, communications networks, harbors)

Source: JICA Study Team

6.2 Establishment of MEZs and Urgent Electricity Supply Plan

The biggest obstacle to Myanmar's economic development is the shortage of foreign currency. Expanding exports is tricky because of the difficulty of identifying competitive exports in a short period of time, and investment conditions are the worst in Asia. The absence of inflows of foreign investment thus continues. With no apparent way out of its difficulties, we propose the following effective measures to revive the Myanmar economy:

- Two to three MEZs furnished to attract foreign investment in labor intensive industries should be established in the area around Yangon, and these urgently provided with power plants. This will rapidly create the conditions to again attract foreign investment into Myanmar in a short period of time.
- Priority should be given to attracting labor-intensive firms in export-processing sectors of industries such as the garment manufacturing, footwear, toy and parts industries to these MEZs. This approach has already proved successful in China, Vietnam and other ASEAN countries, and is also being used in North Korea under the guidance of the UNDP. It is an approach designed to quickly improve investment conditions and earn foreign currency.
- The advantage of this method is that investment can be attracted by urgently developing

(through deregulation and infrastructure development) those regions with the greatest potential for attracting inflows of foreign capital without having to wait for structural reform or infrastructure development throughout the entire country.

Implementing such an urgent plan to generate foreign currency earnings requires the following four actions:

- MEZ and BOT power directives need first of all to be approved. Directives should be used as they can be issued and enter effect more rapidly than laws, which take two years to be officially introduced in Myanmar. (Such directives are already being discussed by officials in the relevant ministries.)
- Internationally attractive MEZs should be quickly created by choosing around two to three of the existing industrial zones offering the best conditions and introducing the MEZ directive. While improvements will also be made to the electricity infrastructure, the investment environment will be improved at a stroke mainly by introducing MEZ rules on a par with international standards.
- Urgent electricity projects will be established at MEZs to enable the provision of electricity around the clock. Used power-generating barges used in ASEAN or ordinary diesel generators will be used. Because of the Government's lack of funds, we propose that they be introduced on a BOT (buy-operate-transfer) basis using private-sector investment.
- The DHSH presently overseeing the development of industrial zones will be upgraded to create an "MEZ Authority" with responsibility for the management and operation of MEZs, and will be given the management and operating capabilities to supply special economic zone services on a par with those on offer in ASEAN countries.

The following additional reasons may be cited for packaging the above MEZs with an urgent electricity supply plan (BOT):

- It creates almost immediately the minimum conditions required in relation to infrastructure, law and services, etc. to rapidly attract foreign investment.
- The Myanmar Government is strongly interested in the MEZ approach, and a committee chaired by Minister Abel has been discussing and drawing up concrete plans for MEZs since 1995. Once a decision is made, therefore, the Government can put this approach into action immediately.
- There is considerable vacant space in existing industrial zones, and several look forward to the introduction of an MEZ law.
- There are firms interested in investing in BOT power projects should the BOT bill be

approved, and proposals have already been submitted to the Government.

- 25 Japanese and Korean firms concentrated mainly in the garment-manufacturing industry have decided to or are considering investing in Myanmar. If the MEZ and BOT power projects are implemented, it is highly likely that even greater investment will enter Myanmar.

Given these conditions, this package is considered to be rapidly implementable and to have a high probability of success.

6.3 Establishment of Investment Environment to Ensure Success of Urgent MEZ Development Plan

The establishment of an investment environment that is attractive in the eyes of investors is essential to success. Of particular importance are the following:

(1) Development of minimum infrastructure: electricity, communications, waterworks and sewerage services, roads, etc. (electricity in particular is of the utmost importance).

(2) Streamlining of process for approval of establishment of firms and construction of plants, etc.: Establishment of one-stop window, which is already taken as given in other parts of Asia. Authority for its establishment and operation should be given to the MEZ Authority (SEZ operator).

(3) Streamlining and acceleration of exporting or importing of machinery and materials: MEZs should be made bonded zones where containers can be freely exported or imported leaving the seal intact. Movement into and out of ports should take no more than 24 hours.

(4) Investors in MEZs should be offered incentives, such as tax cuts and exemptions on a par with ASEAN countries and China and permission for long-term residence.

(5) Contracts for land and buildings in MEZs should be for a minimum of 50 years (with additional contract renewal options), and costs set at an internationally competitive level (no more than US$30/m^2 of developed land). If possible, permanent land use rights (allowing use without conferring ownership) now commonplace around the world should be provided.

(6) Banks (foreign banks or joint ventures) should be established in MEZs enabling currency to be freely exchanged at market exchange rates at any time.

(7) The movement of funds between Myanmar and other countries should be simplified. Freedom of remittance of returns on investment should also be guaranteed through

banks in MEZs.

(8) These rules for MEZs should be specifically laid out in the MEZ directive, and investors offered a guarantee that these rules will not be changed for a minimum of 30 years.

Figure 6-2 Key to Success of MEZs

The success of MEZs depends on eliminating the unpredictable rule changes and unclear legislation found in Myanmar in MEZs if nowhere else, providing international business systems and services, and guaranteeing to maintain them for at least 30 years. Similar methods have succeeded in China, Vietnam and, more recently, in North Korea. The failure of special economic zones in some members of the CIS and countries in Africa has been due in most instances to the failure to guarantee the above minimum level of systems and services required for international business.

Source: JICA Study Team

Figure 6-3 Pilot Projects

- Selection of most promising existing industrial zones in the Yangon area: (1) Hlaing Thaya, (2) Dagon (East), (3) Mingaradon, (4) Thilawa, (5) Shwalinpon, etc. are possible candidates.
- Of these five, Mingaradon and Thilawa, Hlaing Thaya will be chosen as model zones for pilot projects.
  - The existing operator will be upgraded and staffed with permanent staff from the MEZ Authority, and mechanisms put in place to enable customs, banking services and international container transportation to be performed directly in and from MEZs.
- The pilot MEZs will be made to succeed, and the number of zones progressively expanded to five according to demand. If possible, an MEZ and dry port with a bonded zone will also be established in the Mandalay region, which is the location of the No. 2 industrial cluster.

Source: JICA Study Team

6.4 Implementation of Urgent Plan for Supply of Electricity by IPPs and Requirements for Success

The urgent electricity supply plan is intended to solve the chronic electricity shortage in high-priority fields alongside MEZs. Because of the strapped state of government finances and shortage of foreign currency, we propose that the supply of electricity should be developed and operated by the private sector (IPPs), which is already common practice around the world. There are two forms of operation of power utilities by the private sector: build-operate-transfer (BOT) for a limited period, and build-operate-own (BOO), where development and operation is permanently entrusted to the private sector. The successful implementation of BOT/BOO power projects in Myanmar depends on the following minimum conditions:

(1) Free pricing of electricity rates: Suppliers should be allowed to set rates at a level that covers minimum costs and also generates profits.
(2) Electricity rates should be changed in accordance with changes in the environment.
(3) Machinery, materials and fuels should be freely importable.
(4) It should be possible to freely remit returns on investments.
(5) The free exchange of the Kyat with foreign currencies should be guaranteed.
(6) Continued application of rules governing BOT projects should be guaranteed for a minimum of 30 years.
(7) As these conditions can be easily met within MEZs, we propose that electricity BOT projects should be first implemented in MEZs.

There are four methods of improving the industrial zones already operated by firms to create MEZs and introduce BOT principles into the electric power sector. These are as follows:

(1) Firms in MEZs invest jointly in purchasing a generator that is operated on a BOT basis (BOT partnership).
(2) A third party and firms in an MEZ establish a power company to supply electricity on a BOT basis (private-sector BOT project).
(3) The government electricity utility, the Myanmar Electric Power Enterprise (MEPE), and the private sector establish a joint venture to supply electricity on a BOT basis (public-private BOT project).
(4) The MEPE invests independently in supplying electricity for within an MEZ (SOE project).

Methods (1) and (2) are already being considered by firms in existing industrial zones and the MEPE. What is required is a decision and action on an electricity IPP law ready for concrete implementation.

Figure 6-4 Concrete Electricity BOT/BOO Project Proposals

- One example of a pilot BOT power project is that at the Hlaing Thaya industrial zone. Electricity demand is almost 35MW, and BOT power proposals have been put forward by several firms. All firms operate their own small generators at their own expense to make up for electricity shortages. According to a questionnaire survey of 90 firms, the average cost of private power generation is US$0.13/kwh. All firms showed strong interest in a private-sector BOT power project.
- The planned selling cost (including profit) of electricity produced using 50MW barge generators is around US$0.08. This would create an extremely stable power supply cheaper than that produced independently by individual firms. Private-sector electricity BOO/BOT projects have been successfully established in industrial zones in countries such as the Philippines, Indonesia, Malaysia, Thailand, China and Vietnam.

Source: JICA Study Team

6.5 Radical Measures to Solve the Power Shortage Problem

The above proposals for BOT/BOO projects provide an urgent means of supplying electricity in a limited number of MEZs in order to enable Myanmar to escape the present vicious economic cycle. In order to achieve a root-and-branch solution to the problem of power shortages in the entire electric power sector independently of the BOT power projects proposed for MEZs, the following methods should be considered:

(1) Redesign of electricity and energy rates structure based on market principles

Both electricity rates and energy rates (for oil and gas) are presently kept below global market prices found elsewhere, and SOEs are bleeding red ink. The more electricity state-owned power utilities sell, the deeper into deficit they fall, making it impossible to spare the funds to invest in new power generating facilities. It is therefore absolutely vital to adopt a pricing structure that sets electricity rates at a level that covers minimum costs and generates profits. Because of the considerable impact on people's lives of electricity and energy rates, however, prices should be gradually brought closer to market prices over a period of three to five years to avoid causing social unrest. A mechanism should then be introduced so that rates can be subsequently revised in line with changes in energy costs and reset so as not to diverge excessively from international prices.

Figure 6-5 Annual Deficit of the Ministry of Electric Power

Electricity rates in Myanmar are approximately 25 Kyats/Kwh for general use and US$0.08 (about 75 Kyats) for foreign and large firms. Electricity is supplied at even lower rates to SOEs and military installations. Let us assume that 10% of electricity is supplied at US$0.08 and 90% is supplied at 25 Kyats. Power consumption in 1998 was M3.7 billion kW. Compared with if rates were set at the international standard (75 Kyats), the annual loss due to excessively low rates is 165 billion Kyats (US$180 million).

Bringing electricity rates closer to market prices will increase revenues by US$180 million, which can be used to boost power generating capacity in the future.

The sale of petroleum products below market prices likewise results in a loss, and this loss is estimated to be in excess of that for electricity. Rates for both oil and electricity should therefore be raised and the revenues thus generated used for investment in developing the energy and transport infrastructure.

Source: Ministry of Electric Power & JICA Study Team

(2) Urgent construction of offshore gas pipeline

Almost 50% of Myanmar's power facilities are gas-fired. Recently, however, onshore gas production in Myanmar has slumped, and this has been one of the main causes of the power shortages. Offshore gas production, on the other hand, has been steadily growing, but is entirely exported to Thailand. While Myanmar's share of offshore gas production is 25%, the lack of a pipeline makes it impossible to pipe the gas into Myanmar. An offshore gas pipeline should therefore be immediately built to solve the gas shortage.

Figure 6-6 Concrete Emergency Gas Pipeline Plan

(1) Construction of an undersea pipeline from the Yadana gas field to south Yangon.

(2) The existing pipeline up to Thaton in southeast Tangon should be extended to Yangon.

Policy on implementation of (2) has been reported at a recent press conference, but the reported bore of the pipeline is small. The large bore pipeline described in (1) should therefore also be built as soon as possible. Construction of these gas pipelines will enable operation at full capacity of existing gas-fired power generating facilities (currently operating at 50% capacity). It will also enable the introduction of new 300MW gas-fired power generating facilities (which can be built rapidly).

Source: Ministry of Energy & JICA Study Team

(3) Establishment of BOT power projects outside MEZs

Although we propose the urgent establishment of BOT power projects at two or three MEZs around Yangon, BOT power projects should also be more widely adopted

where possible in other fields and regions outside the MEZs in the Yangon area. There is particularly high potential for a BOT power project to provide power for the Monywa copper mine, and BOT power projects principally for provincial industrial zones, tourist areas such as Lake Inya, and the fishery center in the Myeik region.

(4) Spreading of small-scale power generation in provincial cities and provincial rural areas

The diffusion rate of electric power in rural areas of Myanmar is very low and there are many regions which lack electric power. Therefore, electric power development in rural areas by the government and the private sector should be promoted. The central and rural power supply systems have been built and managed by Myanmar Electric Power Enterprise (MEPE). The rate of electrification in the urban areas is high at 97.0%, but that in approximately 14,000 village tracts across the nation is only 7.6%. Major power sources in the rural areas in the descending order of scale are: i) MEPE grids, ii) power generation by village tracts (diesel, small-scale hydropower and gas-fueled power generation using rice husks) and iii) battery lighting (standard: 8 watts) on individual basis charged at Battery Charging Station (BCS) using the MEPE systems or diesel as power sources. Reusable energy potentials and the existing technologies for such energy include small-scale hydropower generation potential and the production and construction technologies relating to it, rice husk resources that amount to approximately 3.5 million tons nationwide and the gasification technology for gas engine generator, and recycling technologies for batteries used for household lights. Myanmar has abundant solar light potential across the country, but wind power is limited to western coastal region and the wind corridor in the inland area. The development of these resources can be implemented only with external grant supports except for some Solar Home Systems (SHS) and solar water heater introduced on individual basis among the rich.

If we set the goals for the electrification of rural areas as 166 villages a year and 500,000 persons and if we assume the use of reusable energy resources, the rate of electrification should rise by 1.2 percentage points a year. However, this would require a total of US $16 million annually for the construction of facilities. Whether or not the electrification goals will be met depends on whether necessary funds can be raised.

Aside from the funding problem, it is advisable to establish a two-pronged electrification promotion strategy for the rural areas: "Government Schemes," in which full-fledged electrification will be promoted by extending the power distribution lines from the central and local power supply systems and "Village Schemes," in which the goal would be to enable lighting for five hours a day based on self-help efforts of villagers. In order to provide relief to the socially disadvantaged, it would be necessary to implement as "Social Schemes" simple

battery-operated lighting using solar light as the power source in poor villages in remote areas that lack resources. Major concrete measures for the electrification promotion strategy for rural areas would include the creation of "Section of Rural Electrification (SRE)" under the umbrella of the Planning Bureau of MEPE, the rehabilitation of existing small power plants (hydro and diesel) and the creation of small hydropower stations in rural areas and promotion of electrification by extending power distribution lines as "government projects" and formal recognition of "Village Schemes" and support for such projects by MEPE, the creation of "Rural Electrification Funds" and the creation and management of a "Performance Bond System" for support and promotion of "Village Schemes." "Capacity Building" for the implementation and operation of rural electrification projects and financial support to "Social Schemes" are also called for.

6.6 Proposal of an Urgent Action Plan for MEZs

(1) Areas for urgent MEZ establishment

- The candidate model zone for urgent MEZ establishment are Mingaradon , Thilawa and Hlaing Thaya.

(2) Major MEZ capabilities/functions and simplification of trade work

Basically, the MEZA office in the MEZ would perform all requisite licensing and approval work by proxy.

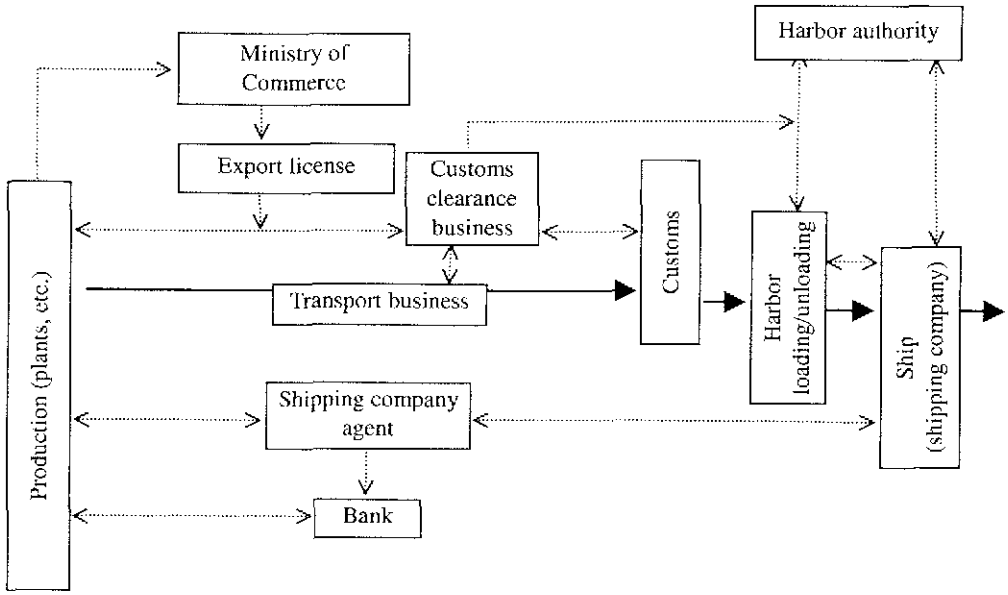
Examples of work performed by the MEZA by proxy.

- Corporate registration
- Licensing of operations in the MEZ
- Approval of employment
- Export/import licensing and registration (or special exemption from requirements)
- Customs clearance procedures
- Contracting for use of electrical power, waterworks, sewerage, etc.

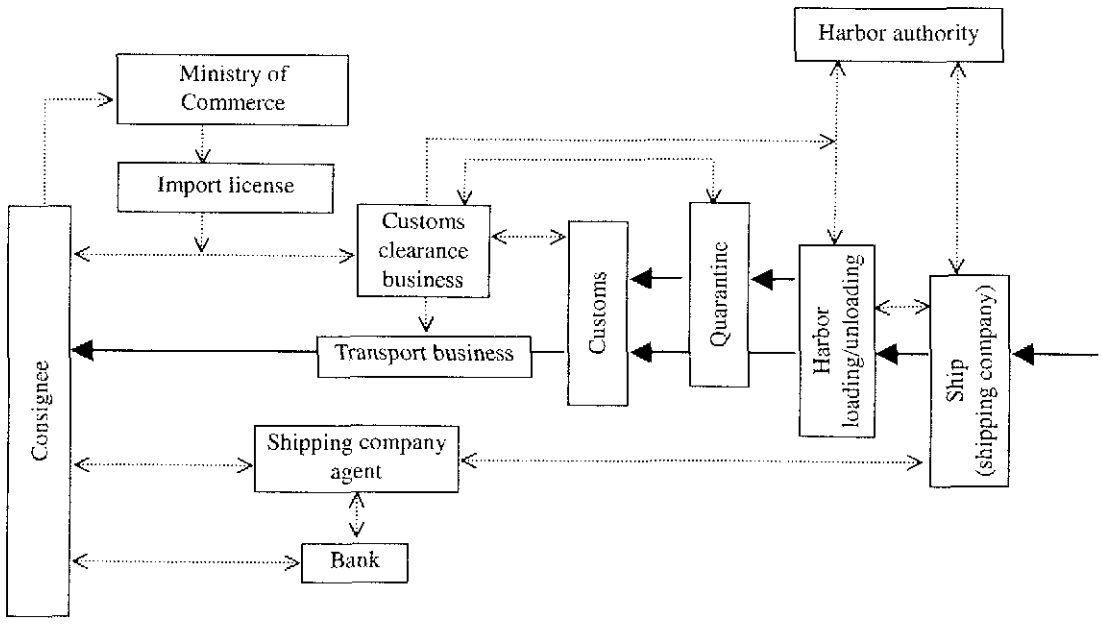
The centralized performance of this licensing and approval work would simplify trade business, as shown in the figure below. To this end, a special directive (MEZ Directive) must be prepared in the concerned ministries (of Commerce, Finance, Nos. 1 & 2 Industry, Agriculture and Irrigation, Forestry and others) upon adjustment with legislation related to registration, export/import work, customs clearance, and quarantine.

Figure 6-7 Actual Trade Flow

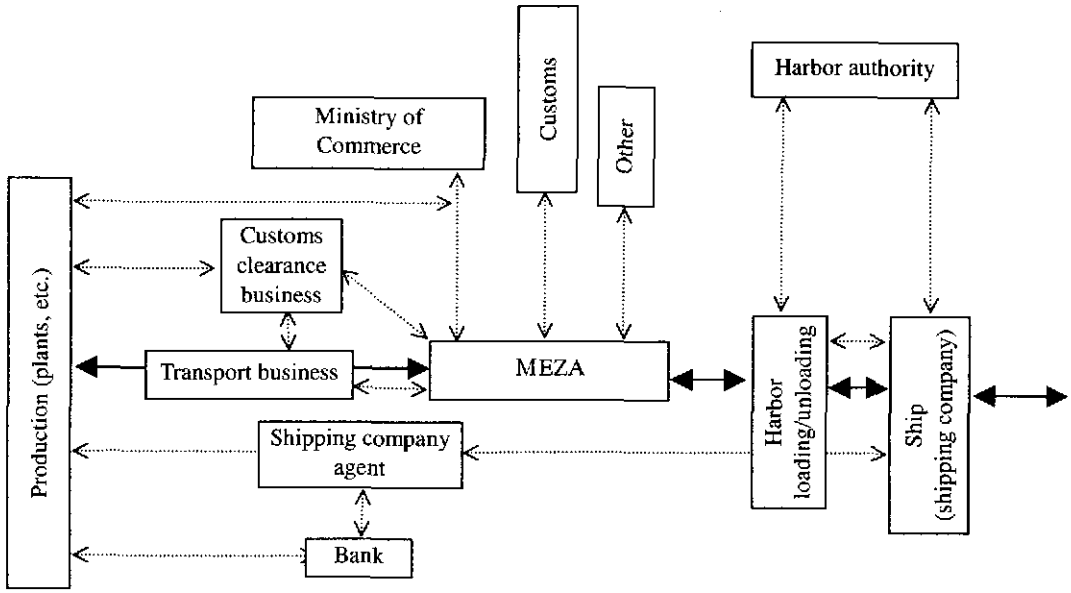
Export (ordinary)



Import (ordinary)



Export/import (within the MEZ)



Source: JICA Study Team

6.7 Prospective Types of Corporate Tenants and Strategy to Attract Siting

The figure below shows the promising fields of industry for attraction of siting based on the strategy for FDI. Another important task is the preparation of institutions for human resource development in order to reinforce production activities within the MEZ.

The most promising fields for attraction of FDI with a view to promoting export are garment-manufacturing, timber processing, food processing, and electronic components. The figure below presents the kinds of firms to be targeted for attraction of FDI in MEZs and the overall strategy for such attraction over the short term. As related above, a total of 25 Japanese and Korean firms, mainly in the garment industry, already have determined or are considering investment in Myanmar. Firms in such labor-intensive fields would be the major targets for the time being.

Table 6-1 Promising Types of MEZ Tenants and Short-Term Strategy for FDI Attraction

	Target FDI	Short-term strategy for FDI attraction
Garment-making field	◎ Korean firms ○ Japanese firms ・ Taiwanese/Chinese (HK) firms	・ Cultivation of the Japanese market ・ Diversification of the garment-making field (textile products plus footwear) ・ Establishment of a garment technical center with developed-country assistance (upgrading of the level of technical capabilities among indigenous firms)
Timber processing field	◎ Thai, Singaporean, and other ASEAN firms ・ Japanese/North American/European firms (dedicated SMEs and trading firms)	・ Improvement of timber distribution (material procurement quota of FDI firms) ・ Establishment of a woodworking technical center with developed-country assistance (upgrading of the level of technical capabilities among indigenous firms) ・ Introduction of used machinery (for indigenous firms)
Food processing field	◎ Thai and other ASEAN firms ○ Japanese firms (dedicated SMEs and trading firms)	・ Improvement of the foodstuff distribution system ・ Conditioning of foodstuff logistics (storage, physical distribution, etc.) ・ Relaxation of restrictions on JV business (limits on rates of subscription, improvement of the disposition of state-run firms, etc.)
Electronic component assembly	◎ Japanese firms (especially those with sites in Singapore, Malaysia, or Thailand)	・ Far-reaching improvement of policy on exchange rates (unification in a reasonable rate)

Source: JICA Study Team

6.8 Infrastructural Conditioning (power supply development led by the private sector based on the BOT scheme)

Under a build-operate-transfer (BOT) scheme, a separation is maintained among the seats of facility construction, ownership, and/or management, etc. The following would be the main features of its application for MEZs.

(1) The government would conclude a business rights contract with a business enterprise. The enterprise would carry out the construction and operation, and transfer the business assets to the government free of charge as a general rule after it has recovered the cost of development.
(2) The business would be operated by the enterprise for a period long enough to enable direct recovery of the development costs and reasonable return to the investors. (In this report, this period is assumed to be 30 years.)
(3) Myanmar has experience of application of a project-finance scheme in connection with the dockland development. It therefore could apply the following arrangement for an electric power project.

Under the project finance scheme, risks that had been borne entirely by the leaders (the major investor and sponsor of the project company) are dispersed among a plural number of concerned parties, including financial institutions. Its point lies in risk allocation (dispersion of risks) as opposed to their concentration in the sponsor. Although there is no change in the overall level of risks per se, this allocation controls the total cost of the premium associated with the risks. It is vital for the project finance scheme to have a legal binding force in order to provide an institutionalized guarantee of and support for such allocation and control. More specifically, the project rights and obligations must be explicitly set forth in the contract, which must make a clear statement of the responsibilities of each party. Earnings consist entirely of the project cash flow, without recourse. Based on this contract, the main managing financial institution would oversee the conclusion of a financial agreement between the private business consortium and the group of concerned financial institutions.

The BOT scheme would be applicable only upon this legislative conditioning for guarantee of the relationships of rights and obligations.

Under the BOT scheme, it should be possible to supply electric power at rates below 13 cents, which is the average cost in on-premise power generation at present. There are consequently thought to be deep needs for the scheme among tenant firms, both current and future. This arrangement would enable establishment of a BOT scheme for a cooperative

association. The association would be funded with joint outlays from the MEZ tenants (or the tenants and the MEZ developer). It would purchase generation facilities and be operated under the BOT scheme.

Chapter 7

Analysis of Availability of Human Resources

7. Analysis of Availability of Human Resources

7.1 Backgrounds of the Study on Human Resources Development (HRD) in the Project

The objectives of the analysis of availability of human resources are to discuss whether or not it will be possible to implement Myanmar's industrial vision and industrial development strategies with the available human resources in the country in terms of quantity and quality and to see what kind of measures should be implemented in the area of human resources development to achieve the nation's development strategies. Since the objective of this research project is to formulate industrial development strategies primarily for the manufacturing industry, the analysis of the "human resources infrastructure in Myanmar" focuses on such quantitative aspects as the supply and demand of labor and the distribution of manpower by industry, and qualitative aspects, centering on the technological capability, skill levels, and the capability for business management.

However, unfortunately materials that show historical development and the present status of HRD in Myanmar in any systematic form have not been made public. Very frequent changes of managing ministry in the educational system, especially in the industrial sector –GTC (Government Technological College) and GTI (Government Technical Institute)- happened. Even during the short period between 1997 and 2000, universities, technical vocational schools and other educational institutions were reorganized radically and they were moved from one jurisdiction to another with great frequency. This study has relied to the extent possible on interviews with the representatives of the government, universities and private enterprises that engage in educational businesses.

7.2 The Present Status of and Problems in Myanmar's Human Resources as Seen in the Industrial Sector

(1) Major issues at present

It is assumed that Myanmar's overall educational plans will be based on the MOE's (Ministry of Education's) Special Four-year Plan now in effect, and the 30-year Plan that is now being worked on (this study was unable to obtain their drafts because both of these plans are treated as confidential). The major conclusions of our analysis of human resources infrastructure in the manufacturing sector are as follows.

(i) An absolute shortage of technological human resources. Most engineers and

technicians are engaged in production technology and, as such, technology development capability is very small.

(ii) A shortage of infrastructure for nurturing engineers and technicians. The educational setup is inadequate in terms of the quantity of human resources to be developed and the direction of selecting different areas for human resources development is fraught with problems.

(iii) There are very few opportunities to acquire new technologies because of a shortage of opportunities to update or replace the manufacturing equipment and process. There is little stimulus for technological development because of limited inflows of technology and know-how through foreign direct investment (FDI) or from abroad.

(iv) Although skills training and nurturing of technicians are implemented aggressively, there are conspicuous shortages of facilities and teaching materials. (There is a serious shortage of skilled workers in terms of both quality and quantity.)

(v) Private enterprises, including very large ones, provide little technological and skills training in-house.

(vi) Information, including that on the industrial sectors, technologies and products in the advanced, industrialized countries as well as the neighboring countries, is extremely scarce.

(vii) Managers of private manufacturing industries (PMIs) are forced to manage their businesses solely on the basis of their narrow experiences and scarce information. Basic management education and information are essential.

(viii) Many of the senior executives of state-owned enterprises (SOEs) are former military personnel, and it is frequently pointed out that they lack the ability to manage businesses. Therefore, management re-education and the introduction of private-sector management know-how and adviser to SOEs are necessary.

(ix) It is often pointed out that qualitative improvement and quantitative expansion of educators and leaders are urgently needed to improve the quality of education.

As Myanmar has a large population, the creation of job opportunities is a major policy priority. If we simply look at the number of workers, there is no special problem. The absolute number of workers (23.1 million in 1998/99) is large. However, there are serious problems, including shortages of job opportunities themselves (despite a relatively low unemployment rate of 4.07% as of 1998/99), a mismatch between the supply and demand of labor when the quality of labor is taken into account, and a shortage of jobs for highly-educated people. A typical example of mismatching of jobs and workers is the shortage of skilled workers. There are a total of 57,000 factories run by SOEs and private enterprises

(2000-2001), even if we assume that each of these factories is to train one worker to become a skilled worker, the number of workers to be trained would be enormous. Between 1999 and 2000, the vocational training centers and schools (VTCs) gave training to a total of approximately 10,000 people to become skilled workers. It is reported that the government's 30-year Industrialization Plan envisions that 320,000 persons need to be trained to become skilled workers during the final five years (2026-2031, the sixth phase of development) of the plan alone. At the other end of the spectrum is a serious shortage of job opportunities in the software industry, a typical example of the shortage of jobs for highly-educated people. For example, more than 90% of new software engineers emigrate in search of job opportunities and better terms of employment.

The ratio of manufacturing industry workers to total employed population has remained largely unchanged at 11.4% for the past 10 years. Their number increased from approximately 1.21 million in 1990 to 1.64 million in 1998/99, or an annual increase of approximately 40,000.

Another serious problem is that of engineers (university graduate level) who are expected to play the central role in the manufacturing industry. Their number is estimated at 25,000-30,000 nationwide. Only about 1,000 new engineers graduate every year, primarily from Yangon Technological University (YTU) and other institutions. The cases of a number of large private enterprises show that the number of engineers relative to the total number of employees is extremely small and that most of these people are engaged in the maintenance of production equipment. With the exception of a few SOEs, new product and advanced technology development is hardly pursued at enterprises. At the same time, although Myanmar's industrial structure suggests that agricultural and fisheries engineers should play very large roles in the development of respective industries, engineers in these fields are extremely scarce.

In addition to these 25,000-30,000 high-level engineers who are mostly university graduates, the so-called "technicians," or graduates of government technological colleges (GTCs) and government technical institutes (GTIs) and graduates of technical high schools make up "technological human resources" of Myanmar. In its 30-year Plan, the government plans to sharply increase these technological and technical human resources. The cumulative total of graduates from GTCs and GTIs [including the technical teachers training institutes (ITTIs)] between 1997 and 2001 stood at approximately 46,000.

A tentative five-year plan to nurture engineers (Master's level) at YTU, the nation's leading engineering university, envisions approximately 200 enrollments each in the fields of machinery, electronics and chemistry as well as 150-200 each in the fields of biotechnology and nuclear engineering. The University appears to be gearing itself up for education in a broad range of engineering disciplines. The fields of biotechnology and nuclear power require highly-sophisticated research facilities and advanced technology, and require enormous amounts

of investment even to nurture one engineer. These are also the fields where it is extremely difficult to commercialize related technologies. Perhaps, it might be better to narrow down technological fields and plan to nurture human resources that will be able to directly contribute to the industries that need to be developed in the immediate future.

While technical high schools and training centers run by various ministries are training highly skilled worker, businesses seldom train them internally. As a result, an absolute shortage of highly skilled worker as well as the low level of their skills and capabilities have been pointed out.

For example, according to data from the Vocational Training Center (VTC) run by the Ministry of Labor, the cumulative number trained at VTC is 3,500. In the past year or two, only 100-150 persons have been trained there. In addition, VTC's educational facilities are small in number and out-dated. It also has serious problems with respect to the quality of teaching materials and instructors. A questionnaire survey of private enterprises recently taken by the UMFCCI, to which 690 companies responded, found that among the workforce-related problems faced by manufacturing firms, the difficulties in recruiting skilled workers was the second most serious problem after job-hopping.

Figure 7-1 Outline of the Industrial Training Center (MOI1,MOI2)

■ Case of ITC run by MOI (2)

	Shinde	Mandalay
Training Level	Skilled	Semi Skilled
No. of. Courses	8 (*1)	4
Training Period	2 years	3 month
Intake / year	230 trainees	80 (40x2)
Training fee	3,600ks / M	3,600ks

■ Case of ITC run by MOI(1)

- 30～40 courses / year
- 4～6 weeks / courses
- (Full time, Part – time)
- (Electronics, welding, inspection, others)
- Skilled / Non – Skilled

Course (*1)	No. of Trainee
Machine Tools Operation	40
Fitter	40
Die Maker	10
Auto Mechanic	40
Electrical Fitter	40
Electrical Machine Maker	40
Pattern Maker	10
Mechanical Drafts - man	10

MOI (1) : Ministry of Industry (1) (42 consumer good : 542 product line. 83 Main factories and 64 Branch factories: Total 147 factories. Total 48,000 employee)
ITC : Industrial Training Center

Source: JICA Study Team

(2) Status of HRD at private enterprises

Although it is difficult to make proper evaluations of technological capabilities of private enterprises, 70 to 80% of advanced engineers who are university graduates are employed by private enterprises and their number is estimated at 14,000-24,000. These figures, however, are derived from the cumulative number of graduates and it is said that only one-third to a-half of these people are actually engaged in work directly related to technology. This means that the absolute number of advanced engineers itself is very small.

There is a tendency among private enterprises, including very large ones, to be reluctant to employ engineers, whose salaries are high. It seems that the management often does not understand the importance of technology in the development of the company. While human resources with technological education are being supplied by universities, GTI, GTC and others, since the compensation and other working conditions are fixed by the school the person last attended, there is little incentive in the society as a whole to strive for upward mobility.

The managerial capability of business executives is a major national priority, and it is essential to strengthen the managerial capability of as many business managers as possible as soon as possible. Many businessmen running private manufacturing enterprises have only elementary school or middle school education, and it has been pointed out that they need rudimentary education in diverse subjects, including bookkeeping, quality control and human resources development management.

(3) Profiles of managers and their managerial capability at SOEs

The most outstanding characteristic of the profiles of managers at SOEs is that many of them are former military men. Based on various surveys taken through interviews, it is estimated that more than 90% of MD/DG, 60% of directors and 40% of managers are former military men. Informed people in Myanmar have pointed out that the high ratio of former military men at the middle and higher levels of management at SOEs means that they do not have enough managerial capability to conduct business in a market economy.

Table 7-1 Executives and Managers of SOE

Post	The percentage of former military
MD/DG	90~(%)
Deputy director general	70~80
Director/General Manager	60
Factory general manager	80~ (Large Factory)
Deputy director/Assistant	50
Director	40
Manager	

■ Case at MOI(1) (Top/middle management)

Training Course	Period	Number of students	Number of programs/year
·Higher management	4 week	40 Persons	1
·Project planning	4-6	40	2
·Finance	4-6	40	2

Source: JICA Study Team

Given the international economic environment in which Myanmar finds itself, management of Myanmar's SOEs needs to be improved and reformed in many areas, including productivity improvement and cost reductions, the analysis of the market for the business, selection of and alliance with partners, the improvement of product quality and technology, the development of new products and markets, investment strategies and human resources development. The delegation of authority and the creation of a hierarchy of responsibilities within the organization, organizational decision-making mechanisms (the methods of decision-making and the desirable formats of conferences), information sharing within the organization and the methods of discussions and decision-making between different divisions all need to be reformed. The corporate culture of SOEs is dominated by military-style top-down communications and needs to be reformed. Some private enterprises in Myanmar are already achieving high growth by adopting such concepts as "subordinates should speak up to their bosses without fear" and "bosses should talk with their subordinates as equals" as their important management philosophy to overcome the country's military-style boss-subordinate relationships. The SOEs should take a leaf from their book.

(4) Information and HRD

The accumulation of technological information is extremely poor. The situation is similar at university libraries, the Ministries of Industry, which have jurisdiction over industries, and SOEs. It cannot be said at least for today that ordinary researchers and engineers are able to

freely make use of the Internet to access overseas information. The exchange of information with other countries, especially strong inflows of information on overseas technologies, products, and markets to Myanmar is essential for the industrialization of the country. A questionnaire survey covering private enterprises taken by the UMFCCI (690 responding companies, multiple answers allowed) shows that the sources of technological information for overwhelming numbers of respondents were friends and acquaintances (cited by 373 firms) and trading partners (225). Other sources were newspapers, radio broadcasts, magazines and others.

7.3 Measures to Upgrade Human Resources in the Industrial Sector

In the industrial sector, a serious shortage in terms of both quality and quantity is expected for now and in the future in the following categories of human resources, i) experienced managers, ii) production engineers, and iii) skilled workers.
Under these circumstances and based on our analysis of human resources for the industrialization of Myanmar, we recommend the following as the priority direction of reforms.

<The basic concept>

For Myanmar's industrialization, the following three pillars are needed for the upgrading of the nation's human resources. The first pillar is the improvement of social infrastructure, including the educational system and raising of the people's educational levels; the accumulation of various information, including overseas information, and the creation of a system to use such information; and raising the quality of teachers and leaders.
The second is the introduction of measures to raise the levels of diverse human resources, including measures for the improvement of knowledge and experiences of workers at private enterprises and SOEs, the introduction of incentives for this purpose, reforms of the business management structures and raising the levels of the businessmen themselves. The third pillar is aggressive introduction of FDIs, which, needless to say, is working as driving forces for raising the levels of human resources in other Asian nations.

<A proposal of three priority measures>

The important concrete measures to be taken for industrialization are, a dramatic improvement in the quality of skilled labor, enhancement of business management capability, the establishment of Industrial Research Center (a provisional name) to gather industrial information, including overseas information, the accumulation of relevant information, the promotion of inflows of overseas human resources, writing and implementing measures to

reverse "brain drain," the introduction of incentives within enterprises and measures to reform decision-making mechanisms, enhancement of management and technological universities, and increasing opportunities for overseas training and education. Exchange of information and people with other countries will play a very important role as the foundation of many measures.

Specifically, we recommend the following three actions as top priority measures. Improvement of the quality of human resources and expanding the supply of talented and well-educated manpower both take time. The following three proposed measures need to be taken at once.

■Proposal 1: Establish advanced vocational training centers (VTCs) and update vocational education and skills training (VEST)

As indicated by the fact that the curricula and educational facilities of vocational training centers run by the Ministry of Industry, the Ministry of Labor and other governmental agencies are more than 25 years old and belong to earlier generations, it is doubtful that the skilled labor in Myanmar has the minimum levels of vocational education and skills training in terms of quality required for "Myanmar: a nation aiming at industrialization." Even at present, skilled workers are in short supply due to an absolute shortage of facilities for and limitations to the number of students admitted to VEST as well as financial constraints experienced by potential students (note 1). There is a risk that the country will be absolutely unable to meet the growing needs for skilled workers that will result from the rising share of manufacturing industry in the country's economy. In industries that require relatively high levels of skills (especially foreign or part-foreign companies), it is highly likely that the shortage of skilled workers is a major constraint to investment (FDI).

(Note 1. Although they are rather old, data for 1997 show that only 10% of households in Myanmar have monthly income of 20,000 kyats or more. Seventy percent of households have monthly income of 10,000 kyats or less.)

Given the fact that it takes a certain period of time to train people in modern skills, immediate enhancement and expansion of VEST are an urgent policy measure. Taking into account that almost all vocational training centers belong to earlier generations, the government first needs to establish a state-of-the-art advanced vocational training center (A-VTC) in order to make up for the "25-year time lag" and press ahead with industrialization. In other words, the government should open a showroom of the state-of-the-art technologies and start an experiment in education. With these measures, the government will reform VEST to levels that are attractive enough for FDI. The establishment of the advanced vocational training center will be the greatest stimulus for reforms.

It is important that in parallel with the establishment of A-VTC, the government should adopt the basic policy for the entire VEST rather than leaving each ministry or agency to decide its own policy for vocational training centers under its jurisdiction and formulate a 10-year modernization plan for VEST. The VEST-C (Council) will work on the policy and the plan, while the VEST-A (Authority) will be created for their implementation. The VEST-A will have functions that cut across various ministries and agencies and will be given the authority and responsibility to perform them.

Objective

The objectives of these measures are to raise the levels of skilled workers to those of the other ASEAN nations to improve the technological and technical levels of domestic enterprises and to meet the basic requirements for bringing FDI to the country. The A-VCT will make it possible for the public to come into contact with the state-of-the-art technology, advanced skills and the latest production processes and educate the public the importance of improving productivity and enhancing competitiveness of the industrial sector. A secondary objective is to promote exchange between public agencies and the private sector in education in technology and skills.

The formulation of the basic plan

The plan should include the basic policy and legal frameworks, the development of qualification and standardization and other institutional frameworks, enhancement of the educational capabilities of public agencies and the private sector (including the sharing of teaching materials, information and facilities), the raising the levels of teachers, identification of priority sectors for skills training (short-, medium- and long-term), enhancement of private vocational training centers and institutions to allow quick responses to the technological and business environment, and the adoption of a dual training system (a system under which both schools and actual production shops are used for educating students) like the one used in the Philippines.

VEST-C and VEST-A

The VEST-C, a council, will be responsible for policy-making and oversight, while the VEST-A will be responsible for enforcement and implementation. These organizations dedicated to VEST will be created centering on people seconded from related ministries and agencies.

The establishment of A-VTC

The state-of-the-art A-VTC will be established to serve as a model for the opening of the new era of industrialization of Myanmar with assistance from foreign governments and other agencies when needed. It will be based on the dual system which places equal emphasis on school (formal) education and acquisition of practical skills in industry.

■ Proposal 2: Create Myanmar Industrial Research Center (MIRC) and build industrial information infrastructure

Establish the Myanmar Industrial Research Center (MIRC) to gather, accumulate and disseminate industrial information. Through these activities, the center will assist in the area of information the formulation of industrial development policy by the government and also the formulation of strategies by businesses. The center will contribute to the overall industrial development of Myanmar as it will serve both SOEs and private enterprises regardless of their size or the sector in which they operate.

Objectives

At present, Myanmar does not have any "information infrastructure" relating to the actual status of domestic industries, analyses of their international competitiveness, and both regional and global information (markets, activities of suppliers, technology, corporate investment behavior, including FDIs, consumer trends and outlooks for the user-industries of individual industries, etc.) on each industrial sector. Myanmar lacks not only micro information on individual sectors but also macro-economic information, including the economic conditions of the neighboring countries that affect individual industries in Myanmar, changes in the neighboring countries' business environment and expectations and needs for the utilization of Myanmar's industrial resources arising from these changes in the neighboring countries, causing severe shortages of information infrastructure needed by both SOEs and private enterprises in formulating strategies for the future. The center will gather and accumulate such micro-level and macro-economic information relating to the industry, provide basic information that is essential for the formulation of industrial development policy by the government and assist Myanmar's enterprises in their strategy development from the aspect of "industrial information infrastructure."

In the other ASEAN countries and Japan, there is an accumulation of enormous amounts of information at large numbers of organizations, such as industrial associations, trade associations, chambers of commerce and industry, research departments of banks, financial analysts at brokerage firms, private market research firms, newspaper companies, universities,

think tanks and consulting firms. These organizations offer diverse information to the government and businesses to be used in public policy-making as well as strategy development at enterprises. Myanmar also has industrial associations, such as the UMFCCI and its member associations, but they are still woefully inadequate to serve as an information infrastructure. The government should take the initiative for the creation of the MIRC until such time as when the country's industrialization will have made certain progress, gather and accumulate industrial information and disseminate it widely among the government officials and business people. Statistics and other numerical data, analyses and information relating to the latest developments in the industry and economy can serve as valuable materials that support planning, discussion and judgment in various quarters, including the discussion of industrial policy by the government and formulation of various strategies by businesses.

Functions of MIRC

In the near term, the MIRC will have the following two important functions.

- *Industrial research function:* The center will carry out various research on not only the existing major industries but also on the industries that are expected to expand or develop rapidly in the future and disseminate information widely. It will take up various research themes to meet the needs of individual industries. Possible themes include the analyses of the present status of industries, a comparative study on the competitiveness of Myanmar vis-à-vis other Asian nations, studies on concrete requirements Myanmar must meet in order to bring more FDIs, analyses of consumer behavior, market studies, and factors in and history of industrial development policies of other countries as well as their actual development.
- Development of industrial information library: Industrial information available in Myanmar at present can be said to be woefully inadequate in terms of both quality and quantity as indicated by poor industrial libraries at the Ministry of Industry and universities. It is necessary to enhance industrial libraries and open them to the industry. The MIRC will extensively gather books, magazines relating to the state-of-the-art technologies, markets, business management and other subjects and industry-related information in other countries that is available to the public and make them available to anyone who wishes to use them. It will offer the use of equipment to freely access the Internet, the information search and retrieval functions as well as links to relevant agencies at home and abroad via its own homepage, and encourage businesspersons to make use of more information.

After a few years, the effectiveness of the activities to that point should be evaluated and

discussion will be held on the addition of new functions if that is necessary. Possible new functions are (1) proposals to the government on the "development policies for various industries" which may arise from the results of research the center will have completed by then and (2) writing of and consulting on management strategies to be offered to private enterprises. These functions are already being performed in the other ASEAN countries.

Organization and other important matters

The MIRC may be led by the government or by a private organization, such as the UMFCCI. However, given the needs for recruiting domestic personnel (researchers at the MIRC) and foreign experts (researchers and advisors), financial support for facilities and operations, and coordination and adjustments with related ministries and agencies in setting research themes and the capability for meeting these needs without difficulty, the most realistic approach would be for the government to take the initiative at least at the very early stages of the center.

Its structure and working should be such that the needs of private enterprises will be fully taken into account and allow participation of foreign experts advisors and unimpeded participation of industry-related people at domestic private enterprises as well as universities. A committee comprising relevant people from the government and the private sector will be formed for each theme, which will have the authority to decide on the contents of research, reports to the government and on how the outcome of the study will be used by industry. Research by the MRIC should cover diverse industrial sectors. For each theme outside talents, primarily from the industry, will be used in addition to the center's own researchers, who will serve as the nucleus of the team. The center will aim at "excellent research" through joint research by specialists at home and abroad.

■ Proposal 3: Expand institutions for management education designed to enhance the managerial capability of PMI executives

A predominant share of managers of private enterprises in Myanmar is owner-managers of SMEs and individuals running small proprietorships. On the other hand, many of the senior executives of SOEs, which are mostly large enterprises, are former military men and there is still a shortage of people who have received management education. Management education is being offered by YIE(Yangon Institute of Economics), the UMFCCI, and some private bodies, but they can only meet the needs of a limited number of people. Although Myanmar has begun the transition into a market economy, which requires executives to arm themselves with management know-how, management education infrastructure is woefully inadequate in terms

of the scale and in the quality of education. Moreover, because of the small scale of FDI, there are few opportunities for transplanting advanced management know-how from other countries. There is no agency that gives case-by-case guidance on the management of individual SMEs. Apart from those which executives learn through friends or other personal contacts, the average businessman has few opportunities to learn about other companies' successes and failures through seminars, special journals, newspapers or overseas literature on management. With the exception of businessmen who have contacts with overseas companies through the imports of raw materials or exports of finished products or those who make frequent business trips abroad, businessmen in Myanmar have few opportunities to learn. A large number of businessmen in Myanmar are groping their way toward a market economy armed only with the knowledge gained from the experiences of themselves, their friends or acquaintances. Therefore, it is absolutely necessary to offer them sharply expanded opportunities to study and learn.

- The creation of an institution for practical management education for executives and managers of SMEs, the enhancement and expansion of existing educational institutions, including the UMFCCI

  (Support for the enhancement of private-sector educational institutions, creation and enhancement of management education courses for SME executives and managers)
- Management education for SOE executives and managers, management education toward privatization

  (Case studies of individual enterprises, including reviews of SOE management strategies, and management education based on such case studies, transplanting of experienced executives from private enterprises to SOEs as top management)
- Expansion of opportunities for overseas experiences

  (Creating opportunities for visits to overseas enterprises to learn about their management and for attending management seminars overseas, offering various seminars in Myanmar to be conducted by executives or scholars from other Asian countries)
- Improvement of the quality of instructors for management courses

  (Creation of opportunities for re-education, accelerated exchange with overseas, an increase in the number of instructors, etc.)

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