

Appendix

Table 5- 98 Questionnaires for Footwear Research

1 Sex	1 <input type="checkbox"/> Male				
	2 <input type="checkbox"/> Female				
2 Age	1 <input type="checkbox"/> 15~ 19				
	2 <input type="checkbox"/> 20~ 24				
	3 <input type="checkbox"/> 25~ 34				
	4 <input type="checkbox"/> 35~ 44				
	5 <input type="checkbox"/> 45 and above				
3 Employment	1 <input type="checkbox"/> A private business's staff				
	2 <input type="checkbox"/> A private company's staff				
	3 <input type="checkbox"/> A foreign company's staff				
	4 <input type="checkbox"/> Government's staff				
	5 <input type="checkbox"/> Trader, self-employed				
	6 <input type="checkbox"/> Proprietor, director of company				
	7 <input type="checkbox"/> Dependent				
4 Monthly income	1 <input type="checkbox"/> Dependent				
	2 <input type="checkbox"/> Below Kyats 10,000				
	3 <input type="checkbox"/> Kyats 10,000~ 19,999				
	4 <input type="checkbox"/> Kyats 20,000~ 49,999				
	5 <input type="checkbox"/> Kyats 50,000 and above				
5 Type of footwear frequently bought	<u>Local-made</u>	<u>Brand</u>	<u>Foreign-made</u>	<u>Brand</u>	
	1 <input type="checkbox"/> Type 1		7 <input type="checkbox"/> Type 4		
	2 <input type="checkbox"/> Type 2		8 <input type="checkbox"/> Type 5		
	3 <input type="checkbox"/> Type 3		9 <input type="checkbox"/> Type 6		
	4 <input type="checkbox"/> Type 4		1 <input type="checkbox"/> Type 7		
	5 <input type="checkbox"/> Local-made fancy		0 <input type="checkbox"/> Other foreign-made		
	6 <input type="checkbox"/> Other local-made ()		1 <input type="checkbox"/> ()		
6 The most preferred type	<u>Local-made</u>		<u>Foreign-made</u>		
	1 <input type="checkbox"/> Type 1		7 <input type="checkbox"/> Type 4		
	2 <input type="checkbox"/> Type 2		8 <input type="checkbox"/> Type 5		
	3 <input type="checkbox"/> Type 3		9 <input type="checkbox"/> Type 6		
	4 <input type="checkbox"/> Type 4		1 <input type="checkbox"/> Type 7		
	5 <input type="checkbox"/> Local-made fancy		0 <input type="checkbox"/> Other foreign-made		
			1 <input type="checkbox"/> ()		

6 ☐ Other local-made
()

7 The second most preferred type

Local-made
1 ☐ Type 1
2 ☐ Type 2
3 ☐ Type 3
4 ☐ Type 4
5 ☐ Local-made fancy
6 ☐ Other local-made
()

Foreign-made
7 ☐ Type 4
8 ☐ Type 5
9 ☐ Type 6
1 ☐ Type 7
0 ☐ Other foreign-made
1 ☐ ()

8 Number of footwear currently held at home

1 ☐ 1 pair
2 ☐ 2 pairs
3 ☐ 3 pairs
4 ☐ Above 3 pairs

9 Number of footwear normally bought per year

1 ☐ 1 pair
2 ☐ 2 pairs
3 ☐ 3 pairs
4 ☐ Above 3 pairs

10 Main factor considered when buying footwear

1 ☐ Brand
2 ☐ Quality
3 ☐ Beauty
4 ☐ All

Type of footwear last bought

Local-made
1 ☐ Type 1
2 ☐ Type 2
3 ☐ Type 3
4 ☐ Type 4
5 ☐ Local-made fancy
6 ☐ Other local-made
()

Brand Foreign-made Brand
7 ☐ Type 4
8 ☐ Type 5
9 ☐ Type 6
1 ☐ Type 7
0 ☐ Other foreign-made
1 ☐ ()

12 Reason to buy footwear last bought as mentioned in 10

1 ☐ Currently wearing footwear was broken and cannot be fixed
2 ☐ Currently wearing footwear became wear & tear and old
3 ☐ Just want to buy an extra one
4 ☐ To be adaptable with the coming season
5 ☐ Just because it's beautiful in the eyes
6 ☐ To wear at a ceremony or celebration
7 ☐ Other ()

- 13 Reason to buy the brand as mentioned in 10
- | | | |
|---|--------------------------|--------------------------------------|
| 1 | <input type="checkbox"/> | Because of advertisement |
| 2 | <input type="checkbox"/> | Recommended by friends |
| 3 | <input type="checkbox"/> | Recommended by sales staff |
| 4 | <input type="checkbox"/> | Found beautiful in the eyes |
| 5 | <input type="checkbox"/> | Price is quite cheap |
| 6 | <input type="checkbox"/> | Price is reasonable with quality |
| 7 | <input type="checkbox"/> | Because it's the brand I used to buy |
| 8 | <input type="checkbox"/> | Other () |
- 14 Advertisement found
- | | | |
|---|--------------------------|----------------------|
| 1 | <input type="checkbox"/> | TV |
| 2 | <input type="checkbox"/> | Magazine |
| 3 | <input type="checkbox"/> | Journal |
| 4 | <input type="checkbox"/> | Other () |

Source: JICA Study Team

(Annex)

1. International Footwear Industry

An overview

(1) Global Footwear Production

The world footwear industry has experienced a continuous change since 1989. Global footwear production declined from 10.3 billion pairs in 1989 to 9.6 billion pairs in 1992. The output then increased to 10.6 billion pairs in 1995 and reached 11.3 billion pairs in 1999. During the last decade of the 20th century, with an exception of the years 1990 and 1991, the world output grew steadily (about 5% annually).

The geographic distribution of world footwear producers, exporters and consumers has changed substantially during the last ten years. The share of Asia in the world footwear market has been increasing. Asia is the continent where a big part of world footwear production is concentrated. About 73% of the total footwear is produced in Asia. China accounts for 72% of total production in Asia and 52% of total world production. China and six other Asian countries are among the 10 biggest producers in the world.

The footwear industry in Europe, the United States and South America has been stagnant. Spain has lost its position as one of the top ten world producers, whereas slow economic recoveries in Russia, the Central European countries and South America have had negative impact on the footwear manufacturing in these countries. The share of the Central European countries and Russia combined was 2.3% in 1999, increasing slightly from the level in 1998. Production of footwear in Italy and the United Kingdom decreased sharply by 10% and 24%, respectively in 1999. The total output of the Western European countries was 969 million pairs

in 1999; down by 85 million pairs from the previous year. Europe is in the second place with 11% share.

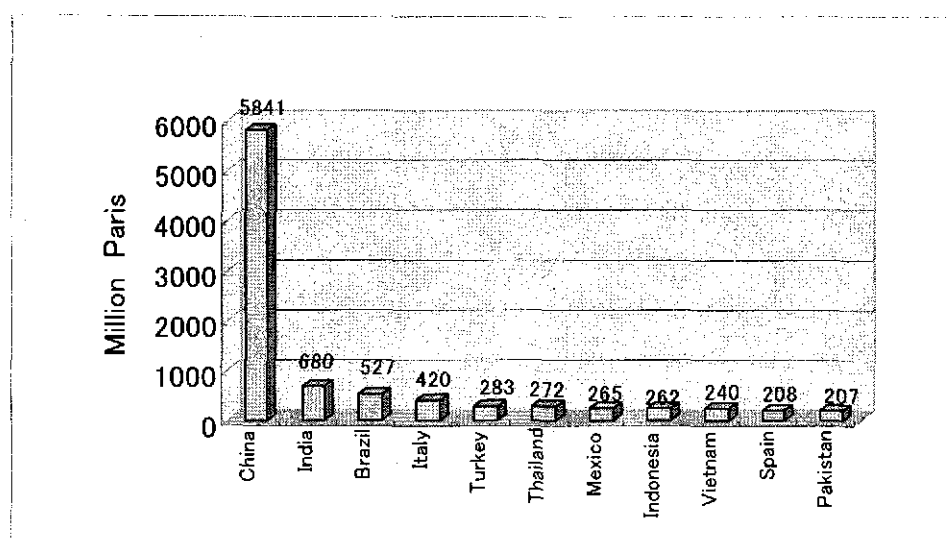
The Americas account for 11% of total world production. The production of footwear in North and Central Americas accounted for 431 million pairs in 1999, down by 10% from the previous year. Total output of the U.S footwear industry was only 121 million pairs, down by 27%, while that of Mexico increased by 2% and reached 275 million pairs in 1999. Among the South American countries, Brazil is known as the biggest footwear producer and exporter, accounting for 92% of footwear exports of the region. In 1999, footwear production in Brazil declined slightly and stood at 499 million pairs.

There is a very visible trend of production centers shifting from Europe and the Americas towards the developing countries of Asia. Even within Asia, there has been a shift from the East Asian countries to China and South Asia.

(2) Major Footwear Producers

China is the largest producer of footwear in the world. In 1999, it produced 5.8 billion pairs of footwear. It is interesting to note that no country in the world is even close to China in terms of footwear production. The second largest producer is India, but it is far behind China in terms of the number of pairs produced. Among the top producers, only two countries are from Western Europe (Italy and Spain). Both of these countries have long history in footwear production.

Figure 5- 82 Global Footwear Production Major Producers in 1999

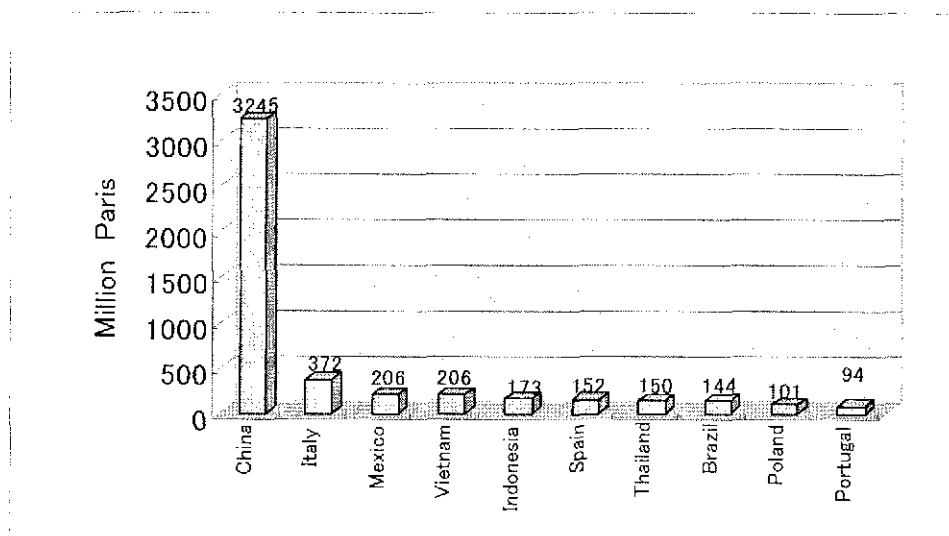


Source: JICA Study Team

(3) Major Exporters of Footwear

China is the largest exporter of footwear. It exported 3.2 billion pairs, or 56% of its total production, of shoes in 1999. Italy is second with 372 million pairs. Although there is a huge difference between the two countries in terms of the number of pairs, they are close in terms of value since the average unit price fetched by Italian shoes in the international markets is much higher than that of China. The third and fourth largest exporters, Mexico and Vietnam, have established themselves as recognized footwear exporters in a very short time. However, the upper end, especially of value added footwear, is still in the hands of industrialized countries, such as Italy, Spain, France, United Kingdom and Germany. Another important development in the footwear market has been that the Eastern European manufacturers have an advantage due to their proximity to major footwear markets in Europe and this can be a source of major concern for Asian exporters.

Figure 5- 83 Global Footwear Exports Major Exporters in 1999



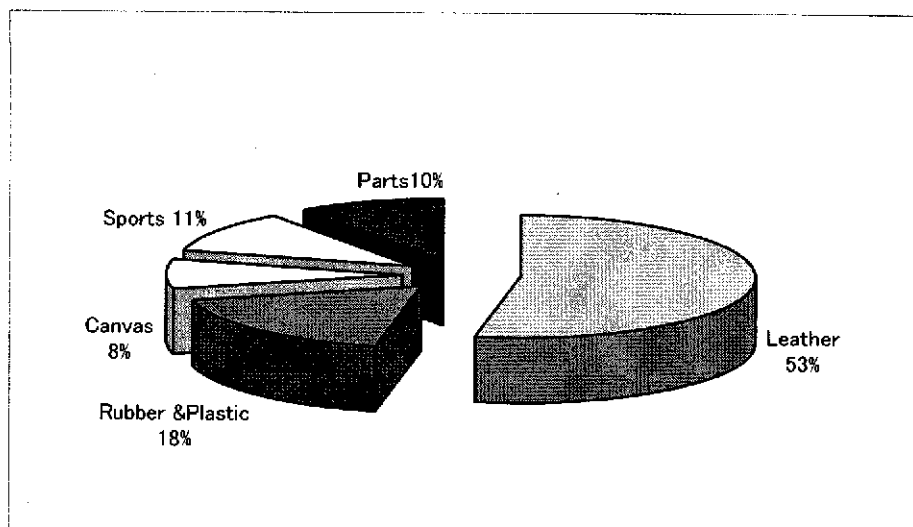
Source: JICA Study Team

(4) World Footwear Export Market

Total world footwear market in 1998 was US\$44 billion. This includes all types of footwear, including those made of leather, rubber, plastic or textiles and sports and other types of footwear. In the total export market, the market for leather footwear alone accounts for around 50%. Leather footwear is also the largest product category in the footwear trade and accounts for 53%, followed by synthetic footwear, which accounts for 18% of total footwear exports. The global trade patterns of the past few years show that each segment of footwear has more or less maintained its relative market share. The share of synthetic footwear has been on

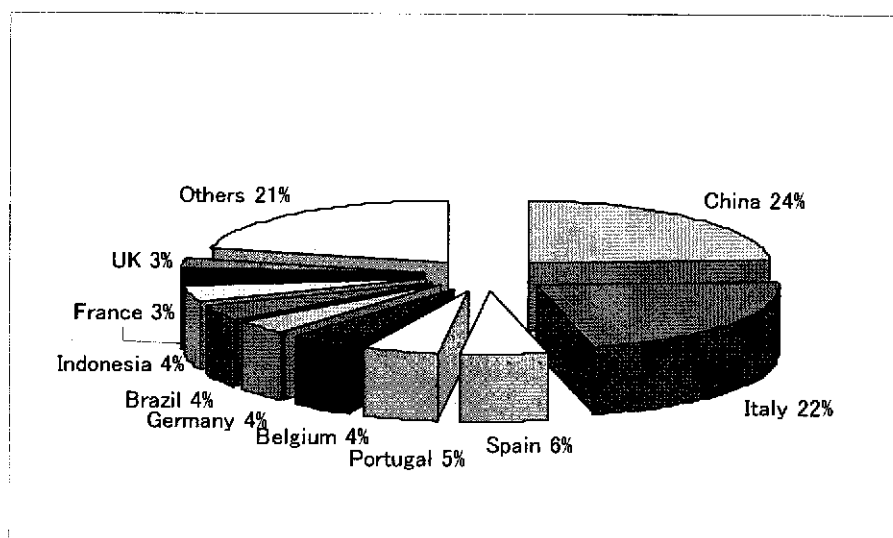
the increase, but only marginally, and it poses little threat to leather footwear.

Figure 5- 84 World Footwear Exports by Product Group in 1999



Source: JICA Study Team

Figure 5- 85 Major Footwear Exporters in 1999(US\$ Million)



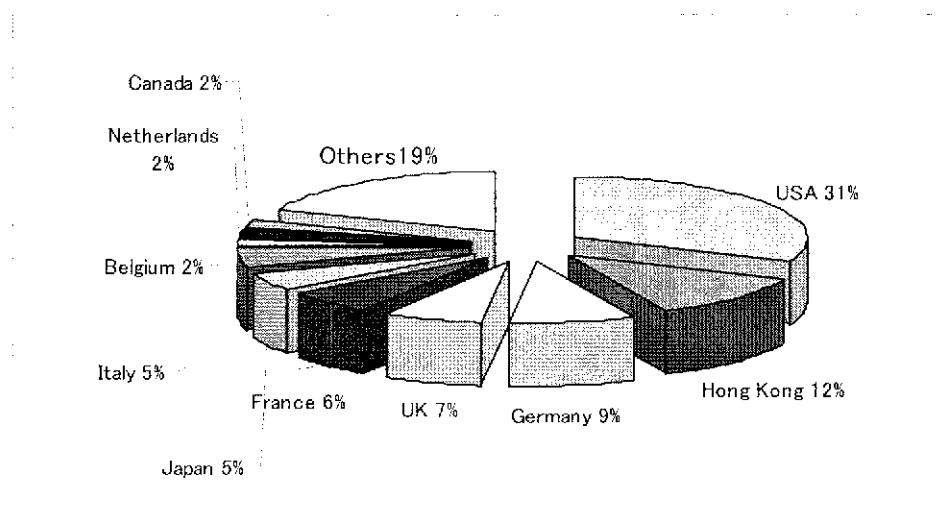
Source: JICA Study Team

(5) Major Importers

The United States is the largest market for footwear and annually imports around 31% of total world imports. The Americas also have the highest consumption of footwear and annual consumption per capita is 3.8 pairs. Within the Americas, the United States has the largest

consumption at around 5 pairs per capita per year. The European Union is the second largest importer of footwear, accounting for 28% of total global imports. Consumption per head of footwear in Europe, however, is 3.1 pairs per annum. In the European Union, major importers are Germany, the United Kingdom, France and Italy. Hong Kong also features as a leading importer, but the figure is inflated because the territory is a major re-export hub.

Figure 5- 86 Major Footwear Importers in 1999



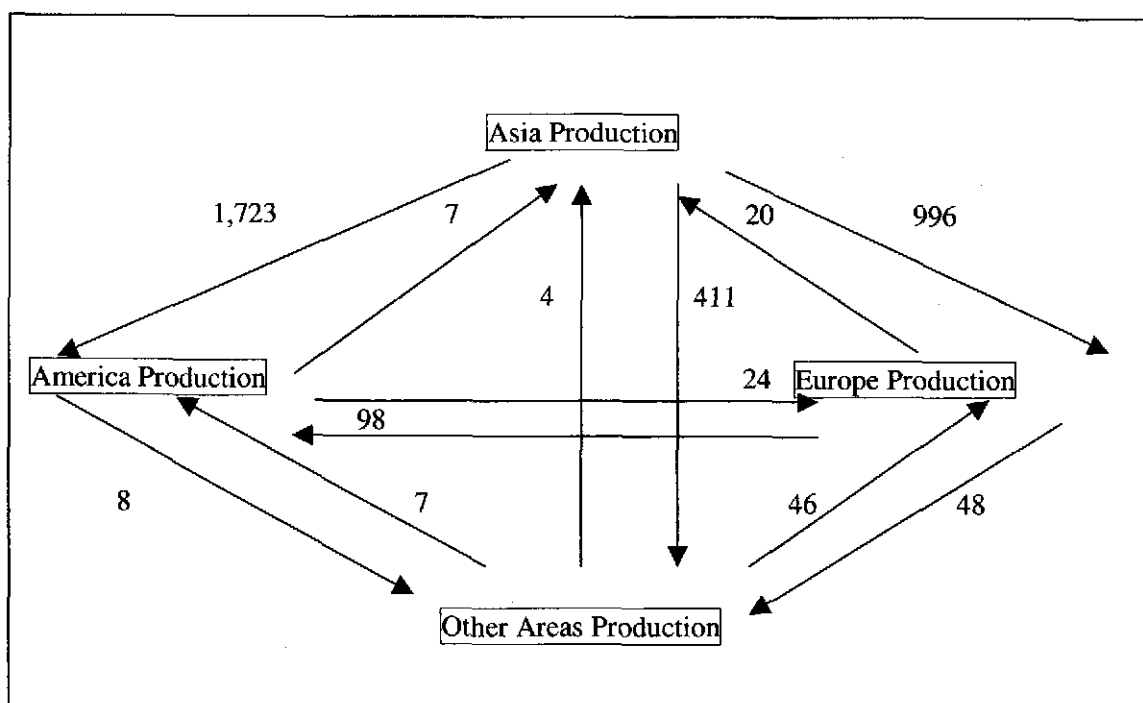
Source: JICA Study Team

1.2 World Export and Import of Footwear

There has been no great change in the position of 10 biggest world exporters of footwear except for Mexico, which has taken the place of Belgium as the 10th biggest exporter. The United States continues to be the biggest importer of footwear in the world. In 1999 the country imported 1,727 million pairs, which accounted for 15% of total world imports of footwear. Other major importers are Asian countries with imports of 1,697 million pairs (of which Japan imported 400 million pairs) and Western Europe, which imported 1.578 million pairs.

In 1999, China was the largest footwear consuming country with 2,500 million pairs, followed by the United States (about 1,700 million pairs), India, Japan, Brazil, Germany, France, UK, Indonesia and Pakistan. The consumption of footwear per capita varies from region to region, reflecting different living standards. The average consumption of footwear per capita in the United States is about 6.4 pairs, while the figure is 5.0 pairs in the Western countries as a whole. In Asia, consumption varies considerably from country to country, ranging from 0.1 pair / capita in Bangladesh to 5.5 pairs / capita in Hong Kong.

Figure 5- 87 The Shifting Flow of World Footwear (million pairs)



Source: World Footwear, March/June 1999

1.3 Forecasts on the World Footwear Industry by 2010

In the next ten years we can expect footwear output of the world to increase further while production shift from the developed countries to the developing countries will become more evident. The share of Asia in total world output increased from 63% in 1993 to 73.9% in 1999 while the share of Western European countries decreased from 16% in 1980 to 10.2% in 1995 and 8.4% in 1999, that of Eastern European countries from 20% to 9% and 2%, that of North and Central Americas from 9% to 5% and 3.8% and that of Africa from 5% to 3.3% and 0.1%.

It is estimated that by 2005 the world population will be 7.078 billion and that world production of footwear will reach 14.061 billion pairs, of which 10.6 billion pairs will be made in Asia, which will have a share of 75%. This will be followed by European countries with 1.5 billion pairs (11%), South America with 864 million pairs (6%), North and Central Americas with 670 million pairs (5%) and Africa with 369 million pairs (3%).

Table 5- 99 Global Output of Footwear in 2005

Production output 2005	World	North & Central America	South America	Europe	Asia & Far-Eastern countries	South Pacific	Africa
Million pairs	14,061	670	864	1,518	10,623	17	369
%	100	5	6	11	75	1	3

Source: World Footwear, January / February – 1999

(1) Asian countries:

These countries account for a substantial share of the total world output of footwear and it is estimated that the volume of output will continue to increase in the coming years. The countries have just undergone a financial crisis, but the governments have successfully directed the process of economic recovery. Asia is one of the most dynamic areas in the world, and the leaders of these countries are pursuing export-oriented policies. Moreover, the leather and footwear industry in many ASEAN countries is given much attention and support from the governments. It is evident that there will be further growth in footwear manufacturing in these countries, but the rate of growth will be lower than in the last ten years.

(2) Central and South Americas:

The United States is a potential market for footwear products from the Central and South America. The countries in this area are in a geographically favorable position for trading with the United States. The expanding scope of cooperation within NAFTA is an assurance for more

business in the footwear industry among the member countries. The political and business environment in the region, however, is not stable, and due to higher cost of labor compared with China and other Asian countries, progressive development of the footwear industry in this region cannot be expected. Among the South American countries, Brazil remains the biggest producer of footwear but its shares in the world output and exports are expected to decrease.

(3) Eastern and Central European countries:

The serious political and economic problems during the 1990s had a negative impact on the footwear manufacturing in these countries. Although their economies have recovered, the countries are facing many problems in restructuring their footwear industry to improve efficiency and competitiveness. It is estimated that footwear output will increase at a reasonable rate but the range of products will become narrower.

(4) Western European countries:

Italy and Spain have been quite successful in both manufacturing and exporting footwear to the world. In the coming years these countries will remain among the world's top footwear producers. The picture of footwear manufacturing in other Western European countries is, however, quite different. The production of footwear in these countries has been declining. The shares of the Western European countries in the world production and exports of footwear have been declining and this trend will continue in the coming years.

Trends of world footwear production can be summarized as follows.

- (1) Demand for footwear products will continue to increase, and the production of footwear in most parts of the world will continue to grow, albeit at different rates. While production in the Eastern European countries and South America will recover slightly, that in many ASEAN nations and China should increase sharply.
- (2) Asia will continue to maintain its dominant position in footwear manufacturing due to low labor cost and abundant supply of materials. The countries in the region used to be big suppliers of casual and relatively low quality shoes, but the situation will change gradually. The ASEAN footwear producers are eager to catch up with the latest technology in shoe manufacturing. It is forecast that after 2010 Asia will be a potential competitor to Europe in high quality footwear.
- (3) Europe and North America produce fashion and high quality shoes and leather products, which are supplied mostly to high-income consumers in the home markets as well as

export markets. They will maintain their position because they have the best, sophisticated technology and know-how in footwear manufacturing, which shoemakers in other parts of the world find difficult to catch up in a short period of time. It is also estimated that the footwear industry will be restructured so that there will be closer linkage between designers, manufacturers, distributors and end users.

- (4) The range of footwear products will become broader, while the life of products will become shorter. Great efforts will be made for the designing of products with better fit and for meeting more refined needs of customers. To this end, new materials and technologies will be introduced in footwear manufacturing.

2. The Footwear Industry in Major International Markets

2.1 The U.S. Footwear Industry under China Syndrome

While the United States accounts for 31% of world's total footwear imports, its largest source is China. Imports from this country accounted for about 65% of total U.S. footwear imports in 2001, while those from Thailand accounted for 2% and from Vietnam accounted for 1%.

Since the United States is the largest market for footwear, the following is a detailed analysis of its footwear imports. Footwear is categorized according to the HS-Code as follows.

Table 5- 100 Types of Footwear by HS-Code

640110: WATERPROOF FOOTWEAR WITH BONDED OR CEMENTED OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS, INCORPORATING A PROTECTIVE METAL TOE-CAP
640191: WATERPROOF FOOTWEAR WITH BONDED OR CEMENTED OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS NESOI, COVERING THE KNEE
640192: WATERPROOF FOOTWEAR WITH BONDED OR CEMENTED OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS NESOI, COVERING THE ANKLE BUT NOT COVERING THE KNEE
640199: WATERPROOF FOOTWEAR WITH BONDED OR CEMENTED OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS NESOI, NOT COVERING THE ANKLE
640212: OTHER FOOTWEAR WITH OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS: SPORTS FOOTWEAR: SKI-BOOTS AND CROSS-COUNTRY SKI FOOTWEAR AND SNOWBOARD BOOTS
640219: SPORTS FOOTWEAR, OTHER THAN SKI-BOOTS AND CROSS-COUNTRY SKI FOOTWEAR, WITH OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS NESOI
640220: FOOTWEAR, WITH OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS, WITH UPPER STRAPS OR THONGS ASSEMBLED TO THE SOLE BY MEANS OF PLUGS (ZORIS)
640230: FOOTWEAR, WITH OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS NESOI, INCORPORATING A PROTECTIVE METAL TOE-CAP
640291: FOOTWEAR, WITH OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS NESOI, COVERING THE ANKLE
640299: FOOTWEAR, WITH OUTER SOLES AND UPPERS OF RUBBER OR PLASTICS NESOI, NOT COVERING THE ANKLE
640312: FOOTWEAR WITH UPPERS OF LEATHER, SKI-BOOTS AND CROSS-COUNTRY SKI FOOTWEAR AND SNOWBOARD BOOTS
640319: SPORTS FOOTWEAR (OTHER THAN SKI FOOTWEAR) NESOI, WITH OUTER SOLES OF RUBBER, PLASTICS, LEATHER OR COMPOSITION LEATHER AND UPPERS OF LEATHER
640320: FOOTWEAR, WITH OUTER SOLES OF LEATHER AND UPPERS WHICH CONSIST OF LEATHER STRAPS ACROSS THE INSTEP AND AROUND THE BIG TOE
640330: FOOTWEAR, MADE ON A BASE OR PLATFORM OF WOOD, NOT HAVING AN INNER SOLE OR A PROTECTIVE METAL TOE-CAP
640340: FOOTWEAR, WITH OUTER SOLES OF RUBBER, PLASTICS, LEATHER OR COMPOSITION LEATHER AND UPPERS OF LEATHER, INCORPORATING A PROTECTIVE

METAL TOE-CAP
640351: FOOTWEAR, WITH OUTER SOLES AND UPPERS OF LEATHER NESOI, COVERING THE ANKLE
640359: FOOTWEAR, WITH OUTER SOLES AND UPPERS OF LEATHER NESOI, NOT COVERING THE ANKLE
640391: FOOTWEAR, WITH OUTER SOLES OF RUBBER, PLASTICS OR COMPOSITION LEATHER AND UPPERS OF LEATHER NESOI, COVERING THE ANKLE
640399: FOOTWEAR, WITH OUTER SOLES OF RUBBER, PLASTICS OR COMPOSITION LEATHER AND UPPERS OF LEATHER NESOI, NOT COVERING THE ANKLE
640411: SPORTS FOOTWEAR, INCLUDING TENNIS SHOES, BASKETBALL SHOES AND GYM SHOES, WITH OUTER SOLES OF RUBBER OR PLASTICS AND UPPERS OF TEXTILE MATERIALS
640419: FOOTWEAR, WITH OUTER SOLES OF RUBBER OR PLASTICS AND UPPERS OF TEXTILE MATERIALS, NESOI
640420: FOOTWEAR, WITH OUTER SOLES OF LEATHER OR COMPOSITION LEATHER AND UPPERS OF TEXTILE MATERIALS
640510: FOOTWEAR NESOI, WITH UPPERS OF LEATHER OR COMPOSITION LEATHER
640520: FOOTWEAR NESOI, WITH UPPERS OF TEXTILE MATERIALS
640590: FOOTWEAR NESOI

Source: JICA Study Team

Total U.S. footwear imports in 2001 are estimated to have been US\$10,242.85 million. The type of footwear the U.S. market mainly imports is the footwear under the HS-Code 640399, that is footwear with outer soles of rubber, plastics or composition leather and uppers of leather nesoi, not covering the ankle. This type accounted for 43% of the total imports in 2001 and was followed by HS-Code 640299, which accounted for 18%. The U.S. imports by type of footwear in 2001 were as follows.

Table 5- 101 2001: US Footwear Imports by Type of Footwear

HS-Code	US\$ in thousands	
	Value	Percentage
640110	5,077	0.03%
640191	5,907	0.04%
640192	43,572	0.28%
640199	12,910	0.08%
640212	78,784	0.50%
640219	162,651	1.03%
640220	46,578	0.29%
640230	7,613	0.05%
640291	583,578	3.69%
640299	2,848,548	17.99%
640312	6,143	0.04%
640319	190,016	1.20%
640320	4,211	0.03%
640330	7,384	0.05%
640340	239,751	1.51%
640351	181,590	1.15%
640359	836,299	5.28%
640391	2,066,720	13.06%
640399	6,784,660	42.86%
640411	520,894	3.29%
640419	744,151	4.70%
640420	234,865	1.48%
640510	21,986	0.14%
640520	151,518	0.96%
640590	44,661	0.28%
<hr/>		
Total	15,830,067	100%

Source: www.ito.doc.gov

The US market imports mainly from China since the total imports from China accounted for 65% of its total footwear imports in 2001. It is found that footwear under the HS-Code of 640399 is mainly imported from China since its import value accounts for 40% of US total footwear imports from China. Second highest US footwear imports from China is found to be HS-Code 640299 type of footwear. US footwear imports from China by type of footwear in 2001 were as follows.

Table 5- 102 2001: US Footwear Imports from China by Type

HS-Code	US\$ in thousands	
	Value	Percentage
640110	724	0.01%
640191	5,796	0.06%
640192	31,771	0.31%
640199	6,067	0.06%
640212	11,792	0.12%
640219	103,124	1.01%
640220	42,536	0.42%
640230	6,953	0.07%
640291	519,198	5.07%
640299	2,422,202	23.65%
640312	5,063	0.05%
640319	137,041	1.34%
640320	1,232	0.01%
640330	258	0.00%
640340	205,882	2.01%
640351	16,535	0.16%
640359	68,528	0.67%
640391	1,362,357	13.30%
640399	4,063,358	39.67%
640411	377,502	3.69%
640419	551,365	5.38%
640420	125,073	1.22%
640510	5,519	0.05%
640520	139,777	1.36%
640590	33,194	0.32%
Total	10,242,847	100%

Source: www.ito.doc.gov

Major type of footwear imported by the US from Thailand is also found to be HS-Code 640399 type of footwear, accounting for 33% of total imports by the US from Thailand in 2001. Another type of footwear US market mostly imported from Thailand in 2001 is found to be HS-Code 640391 type of footwear, accounting for 22% of its total footwear imports from Thailand. From Vietnam, the US mainly imports HS-Code 640399 type of footwear, accounting for 37% of its total footwear imports from Vietnam. This is followed by HS-Code 640411 type of footwear, which accounted for 23% of its total footwear imports from Vietnam in 2001.

Although the US is the largest market for footwear from different countries, it also produces footwear. Non-rubber footwear production in USA for 2000 totaled 68.3 million pairs. In 1999, its production of non-rubber footwear was 78.6 million pairs; hence a 13% decrease in footwear production from 1999 to 2000. Out of 96.5 million pairs, the total production in 2000, 23.9 million pairs were men's shoes, 9.1 million were women's shoes and the rest 63.5 million pairs were juveniles', athletic and slippers. In 2000, out of total production of 96.5 million pairs, 31.6 million pairs of were slippers, a 2% decrease from 1999 production of 32.2 million pairs.

Table 5- 103 Footwear Production in US Market: 1981 to 2000

[Million pairs]

Year	Total	Non-rubber footwear	Rubber or plastic soles/fabric uppers	Rubber and plastic footwear
2000.....	96.5	68.3	20.6	7.6
1999.....	120.9	78.6	31.8	10.5
1998.....	163.2	108.5	40.8	13.9
1997.....	190.1	124.4	49.2	16.5
1996.....	196.0	128.0	51.4	16.6
1995.....	220.4	147.0	56.1	17.4
1994.....	242.5	163.0	59.3	20.2
1993 1/.....	252.0	171.7	62.5	17.8
1992.....	273.6	164.8	92.7	16.1
1991.....	282.1	169.0	97.5	15.6
1990.....	290.3	184.6	89.7	16.0
1989.....	312.8	221.9	76.8	14.1
1988.....	325.3	234.8	76.7	13.8
1987.....	312.1	230.0	71.0	11.1
1986.....	310.9	240.9	57.9	12.1
1985.....	336.5	265.1	54.9	16.5
1984.....	383.5	303.2	62.8	17.5
1983.....	432.8	339.2	78.1	15.5
1982.....	465.9	359.1	92.9	13.9
1981.....	478.1	372.0	95.4	10.7

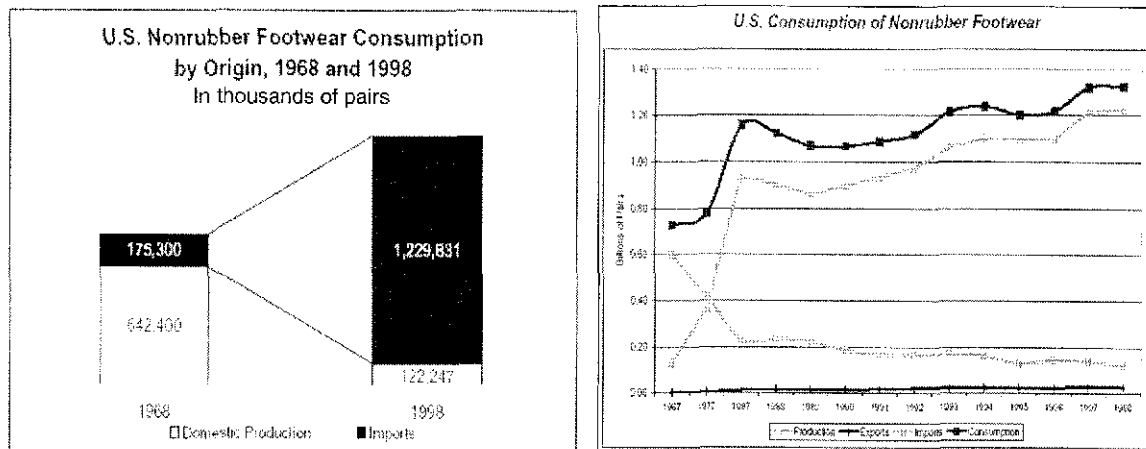
Note: For 1994, Puerto Rican manufacturing facilities accounted for approximately 1 percent of non-rubber footwear production and less than 1 percent of total footwear production.

Source: US Census Bureau

1/ For 1993, a number of companies were added based on information in the 1992 Census of Manufactures. Data were not collected from these establishments for 1992; therefore, the information shown for years prior to 1992 may not be directly comparable. These changes represent approximately 2.7 percent of the total rubber and plastics footwear production. Puerto Rican manufacturing facilities, also newly included for 1993, represent approximately 1.3 percent of rubber footwear production and less than 1 percent of total footwear production.

The production of footwear in US has fallen significantly and US market has become heavily dependent on imports from other countries in the world. The footwear consumption status from 1968 to 1998 in the US market was as follows.

Figure 5- 88 Footwear Consumption in U.S.



U.S. Consumption

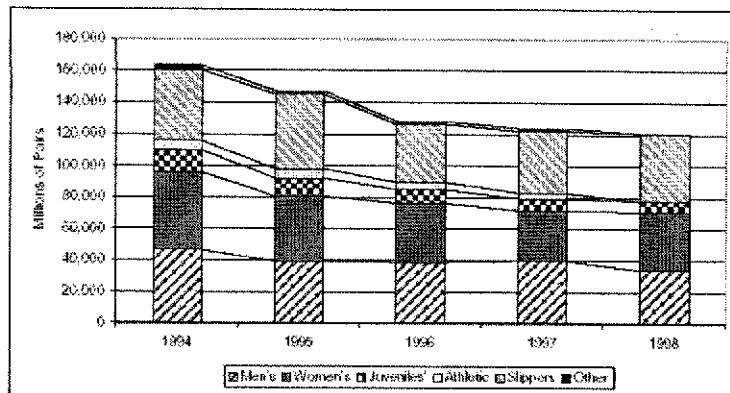
Thousands of Pairs	1968	1978	1988	1994	1995	1996	1997	1998
Production	642,400	418,930	294,846	103,005	146,979	128,006	123,739	122,247
Exports	2,417	6,935	15,766	22,505	20,571	23,725	28,303	27,253
Imports	175,300	373,500	909,089	1,181,268	1,079,450	1,098,884	1,210,167	1,229,831
Consumption	819,283	795,465	1,112,189	1,341,758	1,205,853	1,205,145	1,308,603	1,324,825
Import Penetration	21.5%	47.6%	80.5%	88.7%	89.5%	91.3%	92.7%	92.8%

Note: the difference in production figures with previous table is due to different sources of data

Source: Footwear Industries of America

As shown above, the consumption level of footwear in the US has been rising, and in order to accommodate the high level of consumption, imports of footwear from different countries have increased, since the production of footwear in the US fell significantly between 1968 and 1999. The reduction in production of different types of non-rubber footwear from 1994 to 1998 could be seen as follows.

Figure 5- 89 Domestic Nonrubber Footwear Production



Note: the difference in production with the previous table is due to the use of different sources of data

Source: Footwear Industries of America

Table 5- 104 Domestic Production by Category

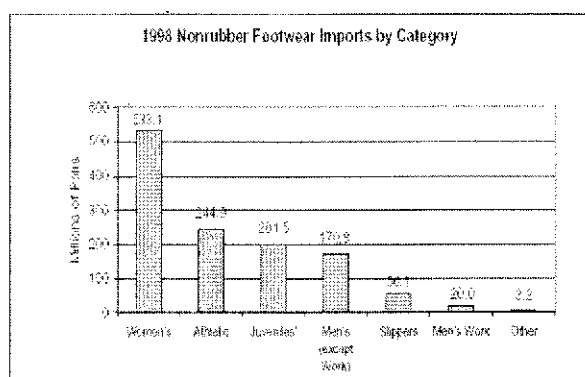
Thousands of pairs	1978	1988	1994	1995	1996	1997	1998
Total Production	418,948	235,100	163,006	146,979	128,006	123,735	122,247
Men's	102,498	55,700	46,419	39,353	38,944	39,765	33,795
Men's Work	N/A	14,200	14,191	12,390	13,094	13,298	16,506
Women's	145,436	76,000	49,263	41,175	37,230	31,976	37,064
Juveniles'	66,761	27,800	13,866	11,639	8,702	7,591	6,550
Athletic	20,852	15,400	6,138	5,880	4,505	3,501	D
Slippers	79,353	56,500	44,565	46,732	36,707	39,187	43,207
Other	N/A	3,400	2,754	2,200	1,918	1,719	D

Note: The difference in production with the previous table is due to the use of different sources of data

Source: Footwear Industries of America

Thus, the US market heavily relies on imports of footwear from other countries-- mainly from China as stated before. US imports of footwear by type and by country in 2001 were shown earlier. Now, we shall look at footwear imports by type and by country in 1998. It is found that the largest source of footwear supply to the US in 1998 was China, as was the case in 2001. Figures are in thousands of pairs.

Figure 5- 90 Nonrubber Footwear Imports by Category



Source: JICA Study Team

Table 5- 105 U.S. Nonrubber Footwear Imports by Category and Country of Origin

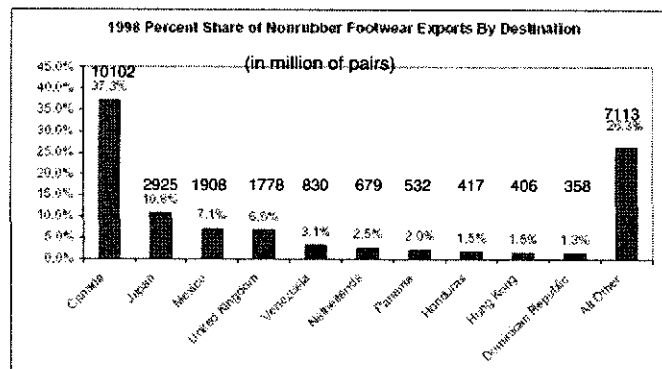
Thousands of Pairs	1978	1988	1994	1995	1996	1997	1998
Total Imports	373,500	903,100	1,101,268	1,079,450	1,098,863	1,213,167	1,229,831
By Category:							
Men's (except Work)	76,000	115,860	151,063	150,543	146,010	163,115	170,826
Men's Work	N/A	11,000	20,250	19,610	18,138	20,218	20,030
Women's	215,200	426,300	510,750	496,730	509,207	542,385	533,124
Juveniles'	N/A	105,200	183,137	189,520	183,631	204,643	201,503
Athletic	43,700	234,100	268,425	198,983	204,519	227,090	244,994
Slippers	N/A	300	23,952	21,128	34,239	51,725	56,107
Other	N/A	9,200	3,691	2,930	3,056	4,590	3,248
By Country:							
China	N/A	85,644	690,719	716,609	750,944	842,110	895,142
Brazil	27,427	112,860	121,239	96,240	91,691	89,698	82,395
Indonesia	428	3,461	79,017	70,512	67,129	67,668	59,226
Italy	62,934	44,465	42,395	44,961	49,528	52,568	47,711
Spain	31,270	23,004	24,256	22,147	21,764	24,206	22,247
Mexico	5,262	8,794	5,977	9,754	16,731	23,582	19,410
Thailand	1,580	16,514	24,509	23,214	17,620	17,788	18,642
Taiwan	117,237	246,985	32,706	20,711	17,845	19,127	13,679
South Korea	30,591	192,244	172,811	15,438	10,067	8,738	9,277
Dominican Republic	-	-	-	1,982	4,586	9,132	8,044

Source: JICA Study Team

It is found that in 1998 women's footwear accounted for 43.3% of total footwear imports to the US (533,124,000 pairs out of total 1,229,831,000 pairs of imports), which was the highest share of footwear imports. They were followed by athletic footwear, accounting for 19.9% (244,994,000 pairs) and juvenile's footwear, accounting for 13.9% (201,503,000 pairs). Since 1978, imports have grown by 229% at an average annual rate of 11%. Since 1988, US imports from China have grown more than ten fold.

As mentioned above, the US has domestic production and has been exporting its footwear products to other countries. However, they are quite insignificant compared to its footwear imports. The US non-rubber footwear exports by type and by country can be seen as follows. Figures are in thousands of pairs.

Figure 5- 91 1998 Percent Share of Nonrubber Footwear Exports By Destination



Source: JICA Study Team

Table 5- 106 U.S. Exports by Category and Country of Destination

Thousands of Pairs	1978	1988	1994	1995	1996	1997	1998
Total Exports	6,935	15,786	22,505	20,571	29,857	27,480	27,253
By Category:							
Men's	2,166	4,573	5,231	4,848	6,442	5,818	6,015
Work	N/A	N/A	853	697	771	823	922
Women's	1,835	2,501	3,666	3,678	5,319	5,755	6,868
Juveniles	924	671	3,508	2,888	5,138	4,506	4,158
Athletic	1,282	7,661	6,803	6,893	8,986	7,363	5,548
Slippers	728	361	1,431	607	2,405	2,175	2,666
All Other	N/A	N/A	1,013	1,222	1,568	1,862	1,998
By Country:							
Canada	2,080	603	2,603	2,388	7,001	7,601	10,102
Japan	309	2,738	2,319	2,563	3,806	3,428	2,925
Mexico	580	158	2,194	1,250	1,140	1,325	1,908
United Kingdom	148	115	1,776	1,069	1,755	1,258	1,778
Venezuela	68	-	-	212	398	646	830
Netherlands	21	169	678	412	672	954	679
Panama	33	231	363	419	508	576	532
Honduras	-	52	222	676	811	658	417
Hong Kong	28	73	511	821	734	522	406
Dominican Republic	-	-	-	-	420	347	358

N/A: Data not available.

Source: JICA Study Team

It is evident that Canada is the largest market for US footwear exports, accounting for 37% (10,102,000 pairs out of total 27,253,000 pairs of exports) of all US footwear exports in

1998. This was followed by Japan, Mexico and UK, which bought 10.7% (2,925,000 pairs), 7.0% (1,908,000 pairs) and 6.5% (1,778,000 pairs), respectively, of US footwear exports.

To sum up, the US is the biggest consumer of global footwear products and mainly relies on footwear products from China, since the footwear industry in other developing countries has not yet fully developed. Thus, it is one of the major countries which developing countries should target for their exports. But, Myanmar's footwear exports to the US are insignificant and found to have fallen in 2001. US import markets for products such as apparel, footwear and food products are far more complex than they initially appear. Many big regional buyers are receptive to new foreign sources or supplies but are rarely contacted because foreign exporters are not able to identify them. Selling to the United States is also complicated by the changing relationship between retailers and suppliers, just-in-time delivery requirements, and the growing role of foreign buying offices of U.S retailers. Thus, Myanmar's footwear manufacturers should initially target EU and Japanese markets for direct sales of Myanmar footwear and Hong Kong, Taiwan and Korean markets for re-exports to other global destinations, taking advantage of their overwhelming expertise in footwear marketing and in directly approaching potential customers. Only when footwear industry starts to develop faster, appropriate measures should be taken to break the reliance on the intermediaries like Hong Kong, Taiwan and Korea by studying how they have established well-organized customer networks.

2.2 Hong Kong's Footwear Industry as Detached Corps in China

In the international footwear industry, China's footwear industry plays the most important role, but we should not forget the footwear industry in Hong Kong, since it is one of the most active markets acting as a transit point in global footwear trades. Hong Kong's shoe-makers have shifted a significant part of their production facilities to mainland China. To draw on Hong Kong's advantage in having efficient access to international market information and financial services, some Taiwanese footwear companies have also establish subsidiaries in Hong Kong or cooperate with Hong Kong companies to start footwear production on the mainland.

The US is Hong Kong's largest export market for footwear, accounting for more than half of its total footwear exports. Japan takes a share of 13% and the EU accounts for 12.3% of Hong Kong's footwear exports. Gross output of the footwear industry in Hong Kong reached HK\$32 million in 1999. The majority of footwear manufacturers have set up offshore production facilities on mainland China to reduce operating costs and stay competitive, leaving only limited capacity in Hong Kong to fulfill small orders. Some manufacturers, after relocation of production facilities offshore, are classified as import-export establishments. Hong Kong's footwear exports and re-exports status and exports by country can be seen in the following tables.

Table 5- 107 Performance of Hong Kong's Exports of Footwear

(HK\$ Billion)	1999		2000		Jan - Aug 2001	
	Value	Growth %	Value	Growth %	Value	Growth %
Domestic Exports	0.044	+77	0.077	+75	0.072	+21
Re-exports	47.840	-8	50.534	+6	32.343	-7
of China-origin	46.530	-8	49.123	+6	31.459	-7
Total Exports	47.884	-8	50.611	+6	32.415	-7

Source: JICA Study Team

Table 5- 108 Hong Kong's Exports by Market

by Markets (HK\$ billion)	1999		2000		Jan-Aug 2001	
	Value	%	Value	%	Value	%
US	25.6658	53.6%	27.1275	53.6%	17.5365	54.1%
Japan	5.0278	10.5%	5.9721	11.8%	4.2140	13.0%
Canada	1.7238	3.6%	1.8726	3.7%	1.2318	3.8%
UK	1.4365	3.0%	1.7208	3.4%	1.0697	3.3%
Mainland China	1.1971	2.5%	1.3159	2.6%	0.8428	2.6%
Netherlands	1.2929	2.7%	1.1134	2.2%	0.6159	1.9%
Australia	1.1971	2.5%	1.1641	2.3%	0.6483	2.0%
Germany	0.9098	1.9%	0.9110	1.8%	0.5835	1.8%
Panama	1.1492	2.4%	1.0122	2.0%	0.5511	1.7%
France	0.6704	1.4%	0.7592	1.5%	0.4214	1.3%
Others	7.6136	15.9%	7.6423	15.1%	4.7002	14.5%

Source: JICA Study Team

The majority of footwear establishments in Hong Kong produce for leading brands and retailers in North America, Western Europe and Japan. Some are increasingly involved in product design and development, engineering, modeling, tooling and quality control. However, most of them still prefer selling to overseas importers and distributors, who in turn market to wholesalers and retailers.

2.3 Vietnam's Footwear Industry

High growth rate in terms of volume and value is evident in Vietnam's footwear industry, which has made a significant contribution to socio-economic growth of the country and is becoming an export oriented industry. Footwear production from 1997 to 2000 in Vietnam can be seen in the following table.

Table 5- 109 Footwear Production in Vietnam

Unit: 1,000 pairs

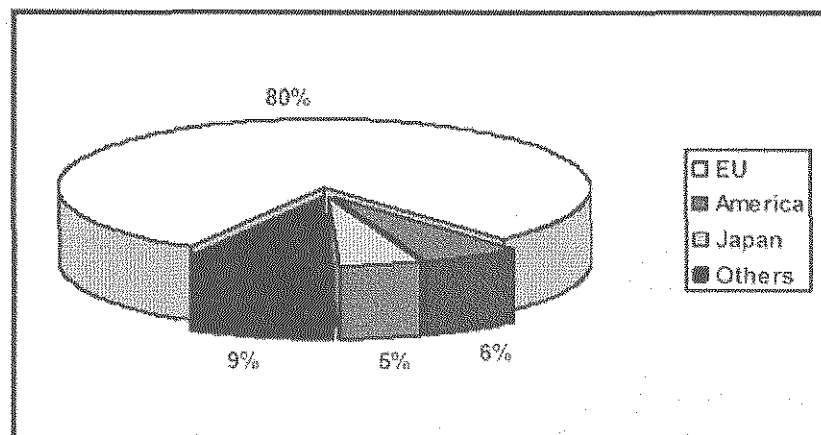
	1997	1998	1999	2000
Sports shoes	93,360	96,390	108,702	126,470
Canvas shoes	38,900	34,690	37,270	34,080
Ladies' shoes	34,780	38,200	43,262	59,470
Others	39,000	43,370	51,582	82,780
Total	206,040	212,650	240,816	302,800

Source: Vietnam leather and footwear corporation

Sports shoes production accounted for 42% of its total footwear production in 2000. Total footwear production in Vietnam increased by 13% in 1999 and by 26% in 2000, which is a significant rate of growth.

Vietnam heavily relies on footwear-making machinery and equipment imported from Taiwan and South Korea, and its footwear industry has depended heavily on foreign partner's supply of materials, components, technique, technology and sample designs (except for canvas shoes and indoor slippers). Technology and designs of Vietnam domestic footwear production are not yet well developed. Although the industry is not yet fully developed, a significant up-trend in footwear exports is evident, with exports rising from 85 million pairs in 1995 to 212 million pairs in 1999 and 276 million pairs in 1999 and 2000 due to low labor cost, quick delivery to buyers and good infrastructure. Vietnam's footwear are mainly exported to the EU countries, especially the UK, Germany, France, Italy and Netherlands, which account for nearly 80% of total footwear exports by volume and value. Footwear exported from Vietnam to the EU benefits from preferential GSP tariff and no quota. The GSP tariff is 70% of normal tariff (normal tariff is from 8 to 17% and therefore GSP tariff for footwear ranges from 5.6 to 11.9%). Vietnam's footwear exports to major countries can be seen in the following figure.

Figure 5- 92 Footwear Exports to Major Markets in 2000



Source: Vietnam leather and footwear corporation

The current status of footwear industry in Myanmar is found to be quite similar to that in Vietnam over ten years ago, when the leather and footwear industries in Vietnam were less developed and output was so small that it was unable to meet domestic demand. But the main products then in Vietnam were canvas shoes, plastic sandals and simple safety shoes. But, major products in Myanmar currently are traditional-style flip-flops. The quality of footwear made in Myanmar, like Vietnam's ten years ago, is rather low. While Myanmar exports a small

proportion of total output, Vietnam exported a large portion of its output. The current situation in Myanmar is similar to the situation in Vietnam ten years ago in that the production of leather goods and footwear is greatly dependent on imports of machinery, materials and chemicals.

In Vietnam there are 240 companies engaged in leather and footwear manufacturing. The figure does not include thousands of households with small production shops making footwear for the domestic market. In Myanmar, there are less than 10 companies producing footwear. They have been exporting small percentages of their production. A comparison of footwear industries in Vietnam and Myanmar can be seen in the table below.

Table 5- 110 Comparison of Footwear Industries in Vietnam and Myanmar

Enterprise by economic sector	Number of footwear manufacturing companies	Enterprise by economic sector	Number of footwear manufacturing companies
Vietnam		Myanmar	
SOEs producing footwear	74		4
Private footwear companies	64	large-scaled footwear industries	5
		other footwear exporting industries	5
Footwear industries for local market	500	Footwear industries for local market	292
FDI footwear companies	63		2
JV footwear companies	16		0

Source: Vietnam leather and footwear association & Myanmar market surveys

It should be noted that out of 302 footwear makers in Myanmar, fewer than 10 have access to export markets. The rest are still in medium-scale category producing footwear for the domestic market. Thus, the footwear industry in Myanmar is just in the infant stage even in comparison with Vietnam's. Due to a lack of machinery and equipment, the production capacity of footwear industry in Myanmar is found to be far smaller than that in Vietnam. A comparison between current levels of production capacity in Vietnam and Myanmar can be seen in the following table.

Table 5- 111 Production Capacity in Vietnam and Myanmar

	Annual production Capacity	Annual production Capacity	1000 pairs Percentage
	Vietnam	Myanmar	
SOE	111,004	2,744	2%
Others	338,996	22,750	7%
Total	450,000	25,494	6%

Source: Vietnam leather and footwear association & Myanmar market surveys

The current level of footwear production capacity in Myanmar is estimated to be just 6% of the Vietnam's current level of capacity at the most. This is mainly due to the facts outlined below.

- Reluctance of foreign companies to invest in Myanmar due to the facts that the policies in Myanmar are never stable and that FDI promotion is ineffective.
- A lack of connections with the international footwear industry, which has led to the situation in which few foreign customers supply machinery and materials to domestic private enterprises on a leasing basis or on the basis of long-term contracts for processing different types of footwear for international brands.
- A lack of support from the government.
- A lack of export market due to poor quality, etc.

Machinery and equipment used in Vietnam's footwear manufacturing enterprises are of the same quality as those of the neighboring countries. In Vietnam, hydraulic cutting presses, sewing machines and equipment needed for cutting and for upper parts sections are highly mechanized and mostly imported from South Korea and Taiwan. Fifteen percent of machinery in operation is over 10 years old. Whereas in Myanmar, the operation at almost 90% of footwear enterprises are extremely labor intensive, operating only with conventional sewing machines. Very few footwear makers are operating with machinery and equipment imported from Hong Kong or South Korea. On account of the fact that the economies of scale are not achieved and the quality is never guaranteed, footwear exports from Myanmar are quite insignificant. Total footwear exports from Myanmar in 1999 were found to be equivalent to just 0.19% of total footwear exports from Vietnam. The figures were 0.40% in 2000 and 0.90% in 2001. A comparison between footwear exports from Vietnam and Myanmar is shown in the following table.

Table 5- 112 Footwear Exports from Vietnam and Myanmar

	US\$ in mil		
	Total Exports 1999	Total Exports 2000	Total Exports 2001
Vietnam	1,334.42	1,468.81	1,575.15
Myanmar	2.54	5.89	14.15

Source: Customs Dept, Ministry of Commerce, CSO, Vietnam Leather & Footwear Ass.

It is shown in the table that exports of Vietnam's footwear have increased over the past three years and so have Myanmar's, although the value of exports from Myanmar is still insignificant compared with that of Vietnam. The existing major export market for Myanmar's footwear is found to be Japan, since 36% of total footwear exports from Myanmar were to Japan in 1999. The figure was 59% in 2000 and 77% in 2001. Whereas the existing major export market for Vietnam's footwear is found to be EU, which accounted for almost 80% of its total footwear exports in 2000. Footwear exports from Vietnam to Japan accounted for only 5% in 2000.

Table 5- 113 Major Markets for Vietnam and Myanmar Footwear Export in 2000

	US\$ in mil			
	Myanmar		Vietnam	
	Value	Percentage	Value	Percentage
EU	0.52	9%	1,174	80%
Japan	3.5	59%	78	5%
USA	0.03	1%	87	6%
Others	1.845	31%	129	9%

Source: Customs Dept, Ministry of Commerce, CSO, Vietnam Leather & Footwear Ass.

However, it should be noted that the level of footwear exports from Myanmar to Japan will be limited, unless the quality of products can be improved soon. EU is one of the biggest markets which Myanmar's footwear exporters should target at, but Myanmar's footwear at this stage cannot effectively compete with footwear from Vietnam in the EU market, since Vietnam's footwear are granted GSP treatment, under which the tax rates range from 5.6% to 11.5%, or about 30% below the normal tax rates. Unlike Vietnam's, the majority of footwear production in Myanmar are for local consumption due to a lack of ability to expand export markets and to meet the international standard in quality and design. On the other hand, Vietnam's footwear makers have concentrated their business mainly on supply to the overseas markets and less than 10% of total output is consumed locally. Since the quality of footwear for the domestic market is poor, Myanmar has been facing increasing footwear imports from the

neighboring countries like China and Thailand. Thus, the improvement of the quality of footwear products should be given a high priority not only for export promotion but also for import substitution. If appropriate measures are not taken now, the situation would be worse when Myanmar joins AFTA and undertakes to reduce import tax rates to 0-5%. It is estimated that footwear exports from the ASEAN countries to Myanmar will increase then. Like their counterparts in Vietnam, Myanmar's footwear manufacturers should make a strategic plan for the development of new products not only for export markets but also for the domestic market. New products should include both new types of footwear and new styles within each type of footwear.

2.4 Thailand's Footwear Industry

Since Thailand is one of the closest neighboring countries of Myanmar, it is worthwhile to analyze its footwear industry. Approximately 64% of footwear manufacturers in Thailand are shoe-producers, 24% shoe parts-makers and 12% shoes and shoe parts-makers. Most of the footwear makers are also found to be small and medium-scale producers. The companies are classified by the amount of capital, and those with the capital of less than Baht 10 million are classified as small-scale producers and those with capital of between Baht 10 million and Baht 50 million are classified as medium-scale producers. But, it should be noted that even small producers in Thailand cannot be compared with small producers in Myanmar, since small producers in Myanmar are operating with capital of less than Baht 2,500 and capital of medium producers in Thailand is found to be much higher than that of large producers in Myanmar.

Most of the producers of sports shoes are large subcontractor-producers for famous foreign brands like NIKE, REBOK, etc., and they produce mainly for exports. They receive technology and designs from the hiring companies and use modern techniques and machinery. Most of them are also in supporting industries, such as tanning, shoe mold making, shoe parts and others, in order to enhance their capability in cost reduction, increase flexibility in production and quality control. Production can be one of the following:

- Production under license or brand name of the parent company abroad, largely for export with the producers entitled to act as authorized local distributors
- Production on a subcontracting basis under brand name of the hiring company abroad
- Production under own brand name

Most of the producers of leather shoes, rubber & plastic shoes and slippers are small and medium producers. However, as mentioned above, their size cannot be compared with that of producers in Myanmar. They normally produce their own brands and target mainly domestic market.

Unlike in Myanmar, machinery and technology for footwear production in Thailand have

been developed all along. In the cost structure of footwear production in Thailand, raw materials costs account for 65%, labor 15% and other expenses 20%. For production with advanced technology, this will change to raw materials 75%, labor 12% and other expenses 13%. In the cost structure of large-scale footwear production in Myanmar, raw materials costs account for 86%, labor 4% and other expenses 10%. Production cost of footwear in Thailand is increasing, but producers cannot increase selling prices in line with increased production costs, thus profit is declining. The most seriously affected are small and medium producers, a majority of which serves the local market. Some small companies whose production failed to meet the standard had to shut down their businesses. Meanwhile, those who can shift to production of fashionable shoes or export to foreign markets will survive. The market of footwear is partly lost to imported shoes and the shoes imports have increased quite significantly, although they are still insignificant compared with exports. In 2000, imports amounted to 5.8 million pairs worth US\$ 22.3 million, up 210.2% and 71.5% respectively from 1999. The top import item was sports shoes, followed by leather shoes and others. Imports were mainly from China, where production costs are lower.

Table 5- 114 Thailand's Imports of Shoes and Shoe Parts During 1997-2000

(Volume: million pairs, value: US\$ million)

Product	1997		1998		1999		2000	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Sports shoes	0.6	8.4	0.3	5.4	0.3	4.3	0.9	7.9
Growth (%)	100.0	55.6	-50.0	-35.7	0.0	-20.4	200.0	83.7
Rubber & plastic shoes	0.3	1.4	0.1	0.6	0.1	0.9	0.7	2.1
Growth (%)	0.0	27.3	-66.7	-57.1	40.0	50.0	400.0	133.3
Leather shoes	0.7	13.6	0.3	5.2	0.2	4.4	0.6	5.7
Growth (%)	16.7	18.3	-57.1	-61.8	-40.0	-15.4	233.3	29.5
Slippers	0.1	0.5	0.1	0.4	0.2	0.5	0.7	1.2
Growth (%)	0.0	66.7	0.0	-20.0	50.0	25.0	366.7	140.0
Other shoes	0.6	6.3	0.4	2.9	1.1	2.9	2.9	5.4
Growth (%)	50.0	46.5	-33.3	-54.0	175.0	0.0	163.6	86.2
Total shoes	2.3	30.2	1.2	14.5	1.9	13.0	5.8	22.3
Growth (%)	35.3	33.6	-47.8	-52.0	55.8	-10.3	210.2	71.5
Shoe parts (000's tons)	3.3	36.2	3.1	36.5	2.4	28.3	3.1	30.6
Growth (%)	32.0	28.8	-6.1	0.8	-22.6	-22.5	29.2	8.1
Total shoes and shoe parts	n.a.	66.4	n.a.	51.0	n.a.	41.3	n.a.	52.9
Growth (%)	n.a.	31.0	n.a.	-23.2	n.a.	-19.0	n.a.	28.1

Source: Department of Business Economics

Thailand's footwear exports have also increased due to the fact that international demand for footwear has increased and also because of the depreciation of the Thai Bahts against the US\$, which has made them more competitive in terms of prices. Thailand's exports of shoes totaled 129.7 million pairs worth US\$ 781.1 million in 2000, representing an increase of 4.5% and 1.0% respectively from 1999. The principal export market for sports shoes, leather shoes, rubber & plastic shoes is the US. The principal export market for slippers is Myanmar, which accounted for 12% of Thailand's total slippers exports in 2000. Thailand's footwear exports by type can be seen in the following tables.

Table 5- 115 Thailand's Exports of Shoes and Shoe Parts during 1998-2001(Jan-Aug)

(Volume: million pairs, value: US\$ million)

Product	1998		1999		2000		2000(Jan-Aug)	2001(Jan-Aug)
	Volume	Value	Volume	Value	Volume	Value	Value	Value
Sports shoes	46.7	551.1	40.3	451.0	36.4	440.3	322	317.4
Growth (%)	-5.7	-14.6	-13.7	-18.2	-9.7	-2.4		-1.4
Rubber & plastic	18.4	45.9	16.3	43.1	17.6	44.9	37	29.4
Growth (%)	-55.4	-65.3	-11.4	-6.1	8.0	4.2		-20.5
Leather shoes	12.6	156.5	14.9	181.4	17.4	177.4	125.1	127.5
Growth (%)	13.5	2.2	18.3	15.9	16.8	-2.2		1.9
Slippers	44.0	67.9	44.5	70.5	49.2	72.7	53.2	53.5
Growth (%)	-7.9	-13.6	1.1	3.8	10.6	3.1		0.6
Other shoes	7.1	21.4	8.1	27.6	9.1	45.8	34.3	17.9
Growth (%)	4.4	-32.7	14.1	29.0	12.3	65.9		-47.8
Total shoes	128.8	842.8	124.1	773.6	129.7	781.1	571.6	545.7
Growth (%)	-17.7	-19.0	-3.6	-8.2	4.5	1.0		-4.5
Shoe parts (000's tons)	3.5	85.6	3.8	83.4	3.4	52.8	34.5	38.8
Growth (%)	-10.3	-5.2	8.6	-2.6	-10.5	-36.7		12.5
Total shoes and shoe parts	n.a.	928.4	n.a.	857.0	n.a.	833.9	606.1	584.5
Growth (%)	n.a.	-17.9	n.a.	-7.7	n.a.	-2.7		-3.6

Source: Department of Business Economics

Although the footwear industry in Myanmar and Thailand cannot be compared, there is an opportunity for the development of Myanmar's footwear industry because of high production costs in Thailand. But there still are a lot of measures to be taken for the development of Myanmar's footwear industry despite its cost advantage.

Chapter 6

Analysis of Location of Industries and Infrastructure

6. Analysis of Location of Industries and Infrastructure

(Summary)

(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

(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 DSHS 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.

(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/m² 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

(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

(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 rural industrial zones, tourist areas such as Lake Inya, and the fishery center in the Mycik 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) 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 Thlain 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.

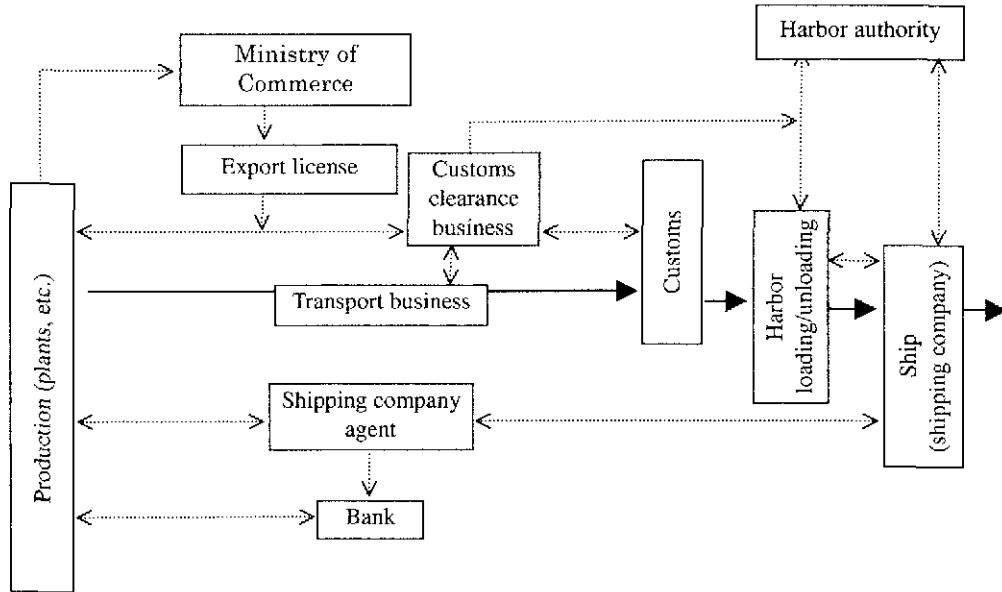
Examples of work performed by the MEZA by proxy.

- 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.

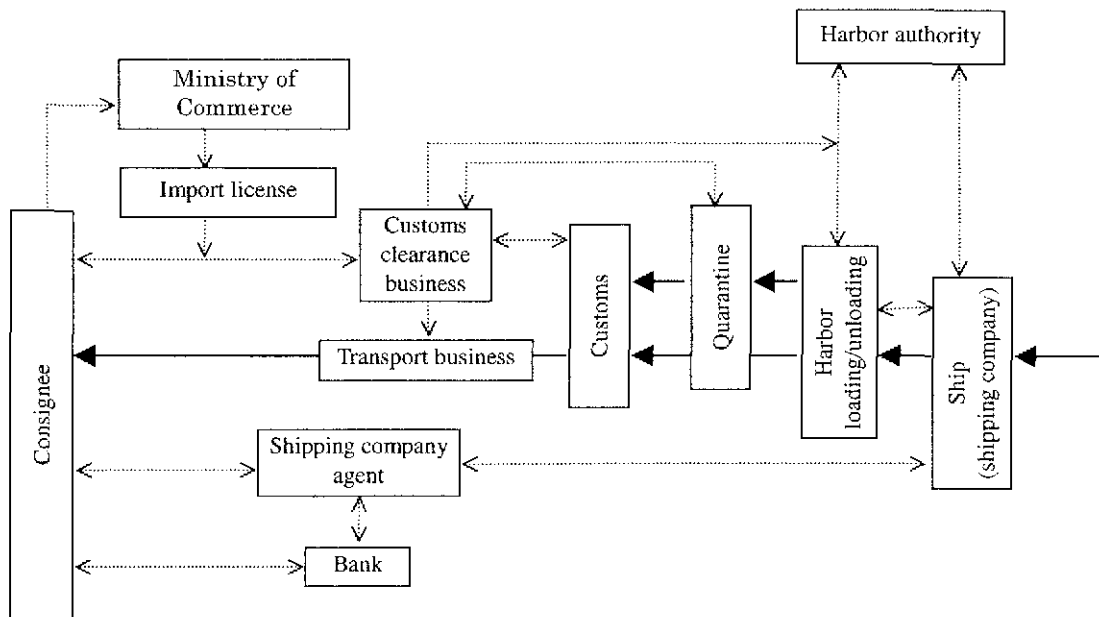
The centralized performance of this licensing and approval work would simplify trade business, as shown in the figure below. To this end, a special directive (MEZ Directive) must be prepared in the concerned ministries (of Commerce, Finance, Nos. 1 & 2 Industry, Agriculture and Irrigation, Forestry and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

Figure 6-7 Actual Trade Flow

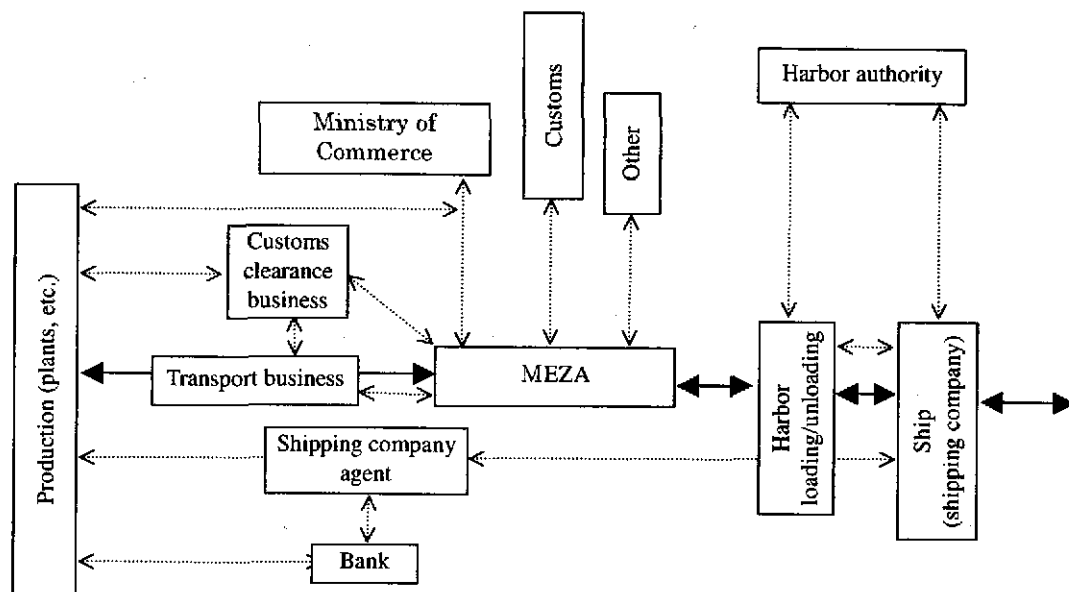
Export (ordinary)



Import (ordinary)



Export/import (within the MEZ)



Source: JICA Study Team

→ Flow of goods
→ Flow of information

(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	<ul style="list-style-type: none"> ◎ Korean firms ○ Japanese firms • Taiwanese/Chinese (HK) firms 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> ◎ Thai, Singaporean, and other ASEAN firms • Japanese/North American/European firms (dedicated SMEs and trading firms) 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> ◎ Thai and other ASEAN firms ○ Japanese firms (dedicated SMEs and trading firms) 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> ◎ Japanese firms (especially those with sites in Singapore, Malaysia, or Thailand) 	<ul style="list-style-type: none"> • Far-reaching improvement of policy on exchange rates (unification in a reasonable rate)

Source: JICA Study Team

(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.

(Introduction)

Industrial Infrastructure/Industry Location Survey: Objectives and Methods

Objectives of the Survey:

In the ongoing worldwide globalization and shift to market oriented economies, Myanmar is now advancing the Asian Free Trade Agreement (AFTA) with other members of ASEAN. Under such circumstances, the country has to promote its economic development. In this sense, it is urgently necessary for Myanmar to improve its industrial infrastructure. Especially during the last 25 years, the country has not been substantially investing in and/or building up its infrastructure. Consequently, almost all Myanmar's industrial sectors have not built their infrastructure sufficiently to develop the country. Electric power failures, in particular, have been constantly occurring creating chronic shortages of electric power. This has had significantly adverse effects on the economy as a whole as well on manufacturing industries. The industrial infrastructure is found to be rather deficient in every industrial sector. Myanmar has had a per-capita infrastructure facility popularization ratio as low as approximately one-twentieth compared to other Asian countries. The industrial infrastructure/industry location survey is essential for the country to formulate an industrial vision. And it has the objective of furnishing part of the information required to map out the industrial vision.

Survey Methodology

Little information is available in Myanmar regarding infrastructure. The country has not published related information for the latest 2 or 3 years. A full-fledged survey in the industrial infrastructure and industry location field has been scarcely made recently due to the decrease of ODA related studies/projects in the country. Consequently, little information remains available to outsiders. To make most of the limited time, therefore, the survey team visited a lot of infrastructure-related ministries and agencies and the Myanmar Industrial Development Committee (MIDC) to gather necessary information and exchange opinions. For industry location, moreover, it should be noted that some industrial complexes have been developed under the MIDC leadership since 1990. More recently, therefore, most of the private enterprises have been located in industrial estates. With these circumstances taken into consideration, the survey team has called upon the largest possible number of industrial estates (8 locations).

Myanmar is a member country of the Mekong Sub-Region Development Project promoted by the Asian Development Bank (ADB) and the Economic and Social Commission for Asia and for the Pacific (ESCAP) under the United Nations Development Plan (UNDP). And Myanmar is one of the major participants of the Asian Highway's concept that will

connect the People's Republic of China with ASEAN member countries and India. The survey team, therefore, visited the ADB and UNDP (ESCAP), thereby successfully obtaining the related information.

An industrial infrastructure/industry location survey would have to cover a very large number of fields while requiring a great deal of regional information. The survey reported herein therefore, has had a lot of exposure to situations where information could not be gathered; thus unsatisfactorily surveying every locality. In addition, sufficient information could not always be obtained from the governmental authorities concerned. Based on such insufficient information, a rough report was originally made up. Those comments and errors, which had been given and pointed out by Myanmar's counterparts in an interim report meeting, etc., were included in the present draft report. At this stage, it should be noted that the findings reported herein might have some shortcomings since the information has been collected and organized within a limited range of both time and data.

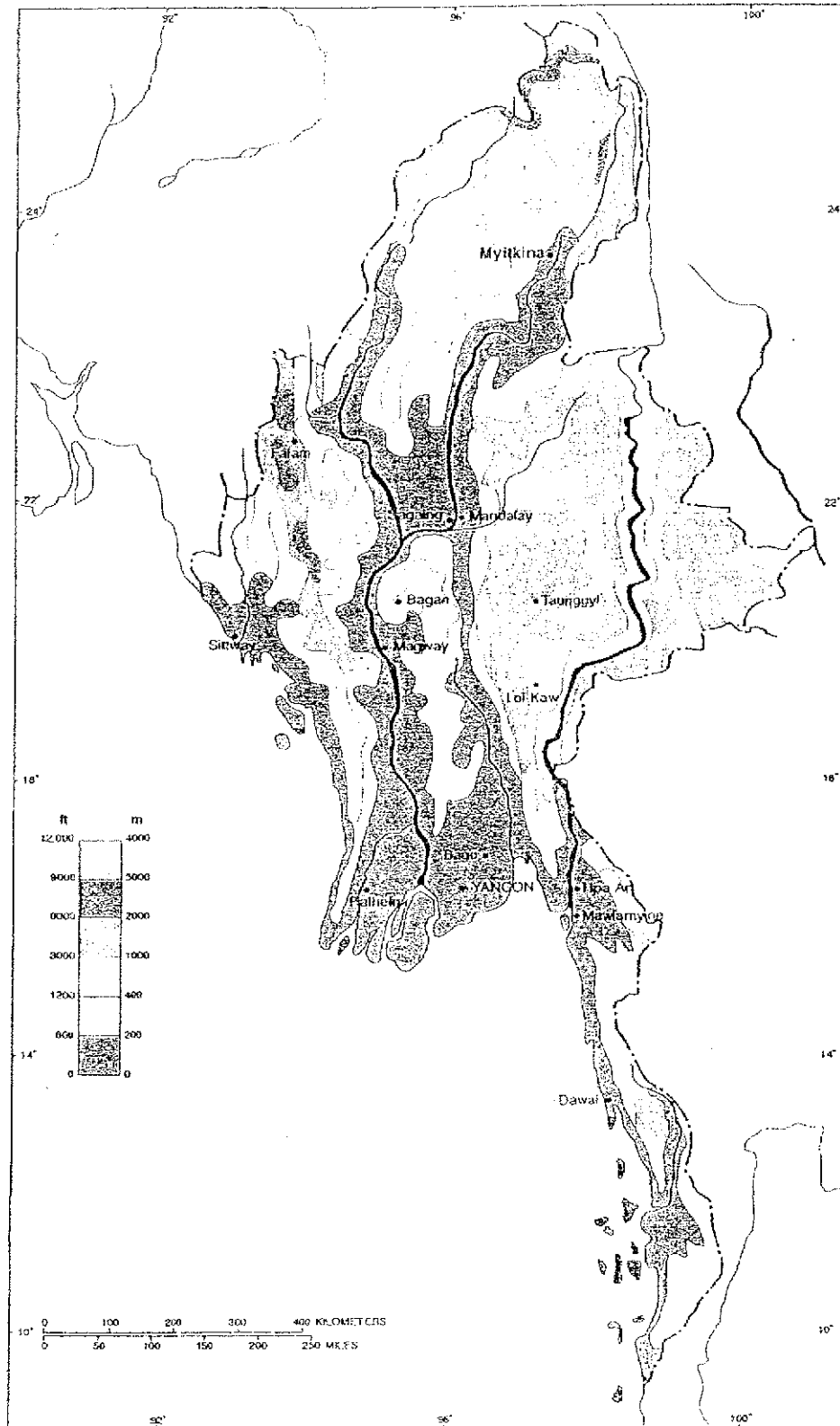
Physical Characteristics & Population Distribution of Myanmar:

In order to understand Myanmar in general, it is important to know the basic physical feature and population distribution. Therefore, Figure 6-8 shows the physical features of Myanmar. It is clear that Myanmar consists of five main regions:

- (1) Central Plain & Delta, where the majority of population is living and most of industries are located,
- (2) Western Mountain Region (Rakhine/India),
- (3) Northern Mountain Region (Toward India/China),
- (4) Eastern Hill & Mountain Region (Border with Thailand & Shan), and
- (5) Southern Narrow Strip along the Thailand Border.

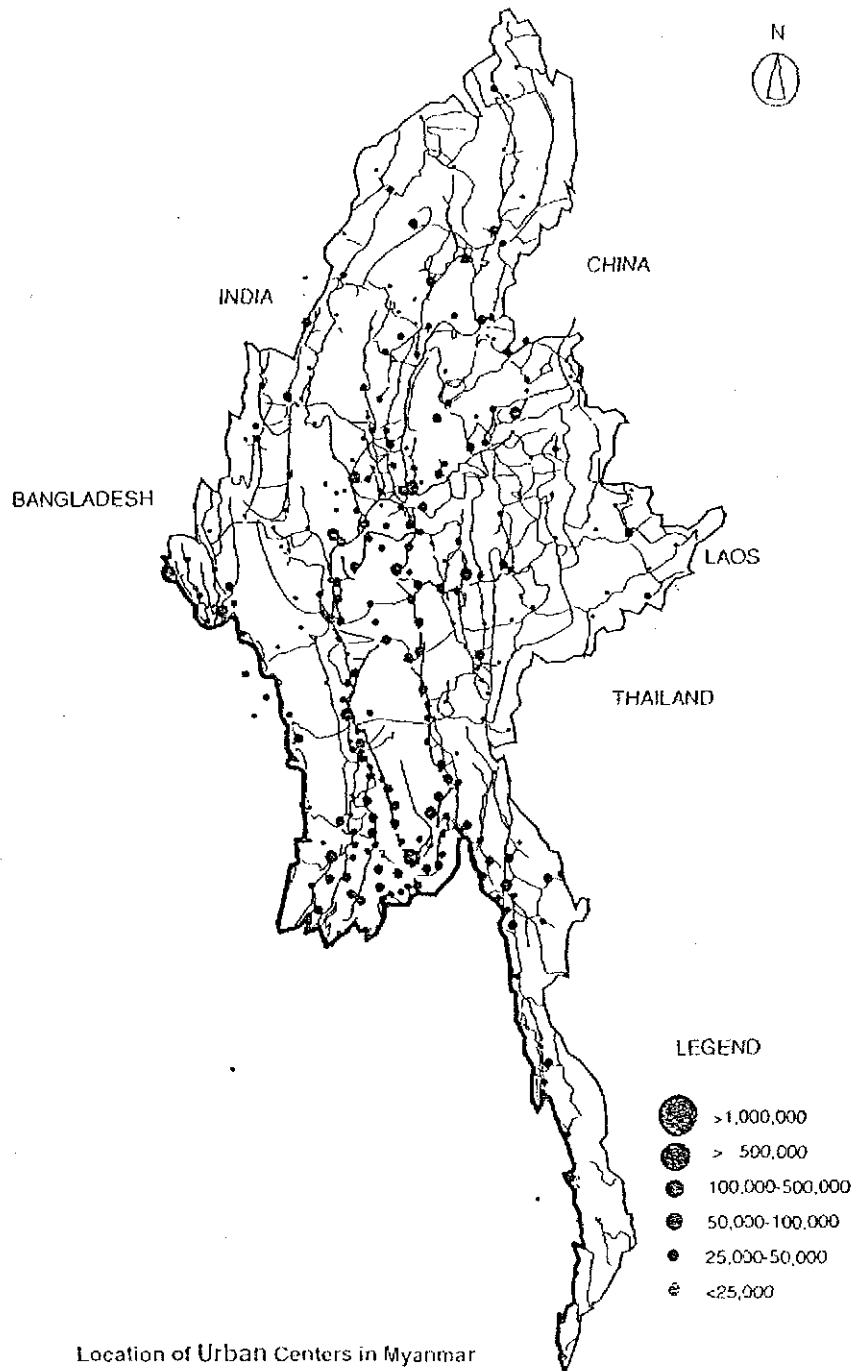
Population distribution is shown Figure 6-9, clearly showing that population is heavily distributed in the Central Plain & Delta Region.

Figure 6-8 Physical Features of Myanmar



Source: Central Statistical Organization

Figure 6-9 Location of Urban Centers in Myanmar



Source: Central Statistical Organization

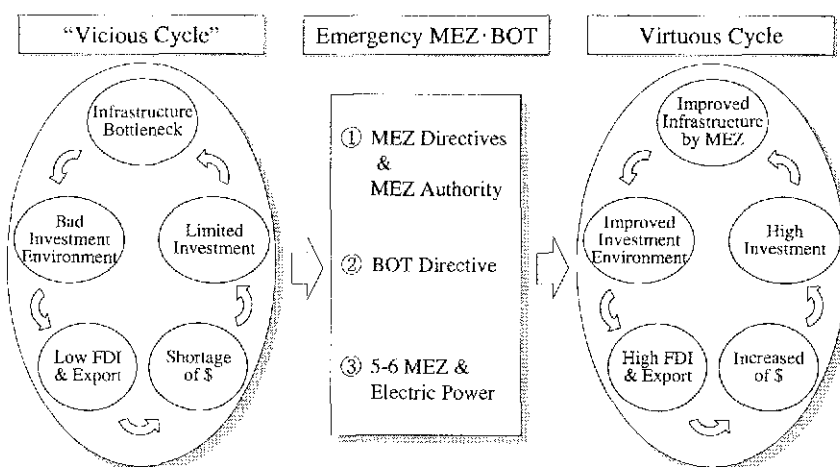
Myanmar Economic Zone (MEZ)/BOT Emergency Plan: Small Cost but Large Benefit!

[Summary & Recommendations]

(1) Critical Current Condition of Infrastructure & Myanmar Economy

- Myanmar's economy and infrastructure sectors (especially electric power) are facing various difficulties, which are creating bottlenecks.
- Because of the various bottlenecks, Myanmar's economy and infrastructure sectors are already in a "vicious cycle". - Myanmar needs a quick and urgent improvement plan to get out the current serious "vicious cycle" in the shortest-time possible.
- Unification of foreign exchange and elimination of export taxes and import restrictions are necessary actions, which Myanmar must undertake eventually, however, without sufficient foreign reserve and outside assistance, these are rather difficult to implement. Therefore, we strongly recommend the urgent MEZ/BOT method to attract FDI again to increase foreign currency earning capacity for the immediate future.
- After improving the economy, the necessary major reforms should be taken without delay.
- Any reforms, which are technically, politically and financially feasible, should start as soon as possible.

Figure 6-10 How to Get Out of the "Vicious Cycle"



Source: JICA Study Team

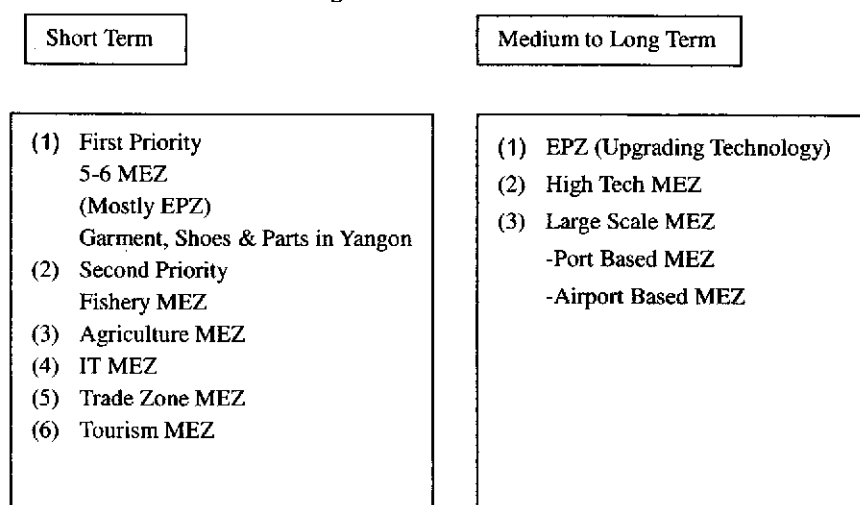
(2) Possible Solution for Getting Out of the “Vicious Cycle”

- Myanmar must improve its critical bottlenecked infrastructure and at the same time improve the investment environment quickly so that new investment (hopefully in export-oriented industries) can be resumed and it is possible to expand FDI and exports at the same time.
- A possible solution is the urgent emergency plan combining an emergency electric power program and MEZ plan to jump-start the economy.
- The following three actions are needed:
 - 1) MEZ and BOT directives should be issued by MIC/TC and MEZ authority should be established by upgrading the existing DHSHD, which has been working on industrial estate development in Myanmar.
 - 2) Five to six MEZ's (export-oriented: EPZ) in Yangon Area (converting existing IEs) and perhaps one at Mandalay.
 - 3) Emergency power generation projects (barge power plant and/or diesel plants) by BOT/BOO scheme.

Four possible ways of implementing urgent power projects (BOT)

- i) Cooperative by factory owners within industrial estates
- ii) An independent power company to be established at each IE
- iii) JV company by MEPE and private participants
- iv) Implementation of projects by MEPE if possible.

Figure 6-11 MEZ Plan



Source: JICA Study Team

(3) Urgent Emergency Infrastructure Plan:

Figure 6-12 Why MEZ·BOT Urgent Method Work?

- I. Small Cost (only MEZ·BOT Directives) & Large Benefits (Increasing FDI & Export)
- II. Successful Experience in China & ASEAN
- III. Willing to Implement MEZ & BOT in Myanmar
- IV. Willing Investors are available
- V. Myanmar Government has been studying since 1995

Now only Need Political will to do!

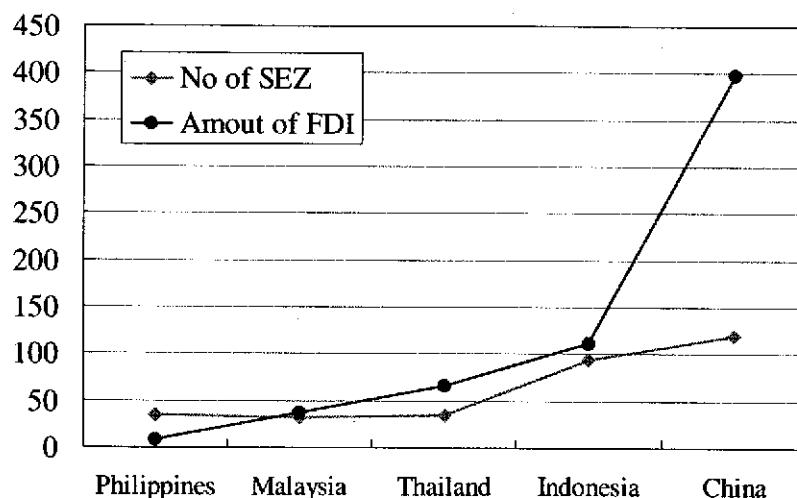
Source: JICA Study Team

- In order to shift from a “Vicious Cycle” to a “Virtuous Cycle”, a quick improvement of investment environment (physical, legal & service together) is needed and MEZ/BOT method can improve both.
- The urgent emergency plan will improve not only infrastructure but also the overall investment environment in the area of export/import, government permit process, labor issues, and legal protection in the shortest time by creating internationally recognized export processing zone rules.
- This type of approach was carried out by Indonesia from 1989 and by Philippines from 1990 very successfully. Also China has used the SEZ as a tool to attract FDI under the Communist Government and limited infrastructure very successfully since the 1980's.
- Myanmar has been studying the MEZ/BOT method since 1995. Preparations for this have been partially implemented and it is possible to implement quickly.
- Existing industrial estates have lot of empty space and can be converted to MEZ in a short time with small input.
- Recently 25 investments (garments) from Korea and Japan have been started and if the investment environment is improved by the MEZ/BOT method, a larger number of FDI are likely to be attracted.

(4) Successful Chinese and ASEAN Experiences in SEZ Development

- 1) In just 12 years, China, Thailand, Malaysia, Philippines and Indonesia (5 countries) prepared high quality SEZ (about 300) and attracted \$521 Billion US Dollar FDI
- 2) High Quality SEZ have been developed by China and ASEAN countries including the following items:
 - i) Basic infrastructure (power, telecommunications, water treatment, bonded warehouses)
 - ii) Custom friendly service: One-stop-window type
 - iii) Stable & attractive rules & regulations in (trade, F. exchange, remittance of money, employment etc)
- 3) Now more than 90% of manufacturing industry is attracted to these SEZ, therefore without developing attractive SEZ, it is difficult to attract FDI and develop modern economy.

Figure 6-13 SEZ and FDI in Asia Countries (1986-1997: In Billion US \$)



Source: JETRO & JICA Study Team

Table 6-2 SEZ and FDI in Asian Countries (1986-1997: In Billion US\$)

Country	No of SEZ	Amount of FDI
1. China	120	398
2. Indonesia	93	111
3. Thailand	35	66
4. Malaysia	32	37
5. Philippines	35	8
Total	295	621

Source: JETRO & JICA Study Team

(5) Cost & Benefit of the Plan: No Cost but Large Benefit to Myanmar!

1) Cost to Government

- The urgent emergency plan basically entails improvement of regulations and introduction of a new MEZ Authority
- The Government role is to improve the legal and institutional aspects and actual physical improvement can be done by the private sector.
- The Government is only expected to pass the MEZ and BOT directives and regulations and set up the MEZ Authority and maintain the stable attractive condition for at least 20-30 years.
- The cost to the Government will be nearly nothing but benefit from the MEZ's can be large (300,000 to 500,000 new jobs and US\$ 250 million per year within 5-6 years).

2) Benefit from the urgent emergency plan to the Nation

Table 6-3 Future MEZ Target: 2005-2020

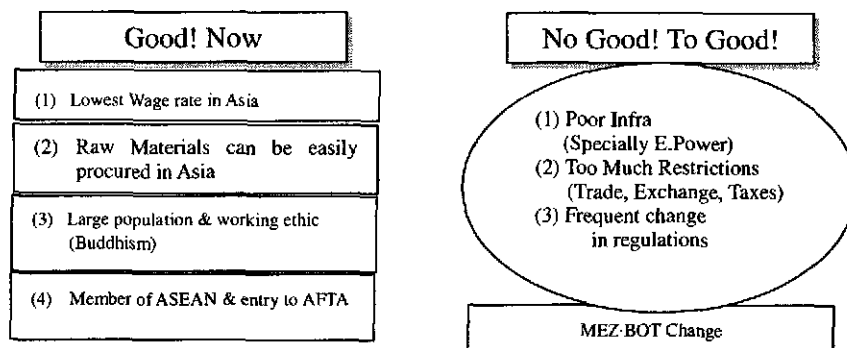
	2005	2010	Total
MEZ	5	20	50
Employment	0.5M	1.0 Million	3.0 Million
Value Added	US\$250 Million	US\$1.5 Billion	US\$9 Billion
Net Value/Work	US\$500	US\$1500	US\$3000

Source: JICA Study Team

- The expected employment from the 5 MEZ (EPZ) is likely to be 500,000 new jobs, and these will generate US\$ 250 million at least. They may not be fully occupied by the year 2005 due to time lag but they can be fully operational in 5 years or so.

(6) Evidence for Investment Opportunities to Myanmar

Figure 6-14 Why MEZ·BOT Will Attract Investors?



Source: JICA Study Team

- Seven Japanese and 25 Korean garment investments to Myanmar have materialized recently and a few factories are starting in this year.
- According to investors, Myanmar is attractive place for labor-intensive industries such as garments, shoes and toys from now on.

Main reasons are as follows:

- 1) Labor wages are low (lower than China & Vietnam under the current exchange rate) and relatively abundant labor resources (nearly 50 million population) are likely to keep the wage rate relatively competitive for some time.
- 2) Being a member of ASEAN and Buddhism culture makes Myanmar attractive to Asian investors especially Japanese and Korean investors.
- 3) Raw materials for garment industries are now largely manufactured by ASEAN & China, and Myanmar is close to these countries. Therefore, materials can be imported easily and the AFTA agreement may help even further in the future.
- 4) Major problems: (a) lack of infrastructure especially electric power (b) transportation cost is higher and takes an extra week compared with Vietnam and China, (c) multiple exchange rates and many other business restrictions and obstacles.
- 5) After weighing the advantages and disadvantages, 7 Japanese garment investors have decided to invest in Myanmar and this evidence is very encouraging for the proposed plan to attract more labor-intensive investors.
- 6) Now 4000 garment factories are operating in Bangladesh alone and more in China and ASEAN countries, if Myanmar is able to improve its infrastructure (especially electric power) and investment environment by introducing EPZ concept, 10% to 20% of these factories where the wage cost reached over US\$100, can shift to Myanmar. These garment factories are expected to employ 500 to 2000 workers per factory. It is not so difficult to

attract 1,000 factories with average workers of 500 (0.5 million) within 5 to 7 years as many other Asian countries have done so successfully.

- 7) Based on these opinions of Japanese investors, we are confident that Myanmar can achieve the goal set by the urgent emergency plan attracting 1000 labor intensive investments creating additional 500,000 workers and generating at least US\$250 million net income within 5 years or so if Myanmar Government takes proper actions mentioned above with a strong political will and leadership.

(7) Basic Requirements for Successful MEZ Implementation

- 1) Minimum infrastructure (electric power, telecommunications and water supply/treatment)
- 2) Free entry and departure of machinery and raw materials having a bonded warehouse function within the EPZ.
- 3) Free exchange of foreign currency under the market rate
- 4) Free and flexible entry and remittance of money.
- 5) Long-term lease or ownership of land at least 30-50 years at a competitive price.
- 6) Flexible and easy government permits and regulations: One-stop-window is recommended.

(8) Basic Requirement for Successful BOT Method Infrastructure Development

- 1) Power service fees should be allowed to be set based on the cost of production including fair profit and interest.
- 2) Power service fees should be allowed to adjust according to changes in production cost (escalation clause)
- 3) Consumers and suppliers should be allowed to have long term contract (10 to 20 years).
- 4) Plants and equipment, spare-parts and fuel should be imported freely for the BOT project.
- 5) Remittance of profit will be guaranteed.

(9) Possible Assistance from Japan if Myanmar decided to implement the MEZ/BOT Urgent Plan

Figure 6-15 MEZ and BOT Method Assistance Possible from JAPAN

- I. MEZ Directive & MEZ Authority Support
(Experts Dispatch & Development)
- II. MEZ Authority Training
(Study Tour for ASEAN)
- III. FDI Promotion Support for MEZ from Japan, Korea & ASEAN
(Development Study & Expert Dispatch)
- IV. BOT Directive & Training
(Expert Dispatch, Development Study)

Source: JICA Study Team

- 1) MEZ Directive and MEZ Authority (experts dispatch and/or development study)
- 2) MEZ Authority Staffs (training program in Asia and Japan)
- 3) MEZ investment promotion from Japan and Asia (experts dispatch and/or development study)
- 4) BOT/BOO directive and system (experts dispatch and/or development study)
- 5) Establishment of specialized MEZ such as IT MEZ, Trade MEZ and fishery MEZ (experts dispatch and/or development study)

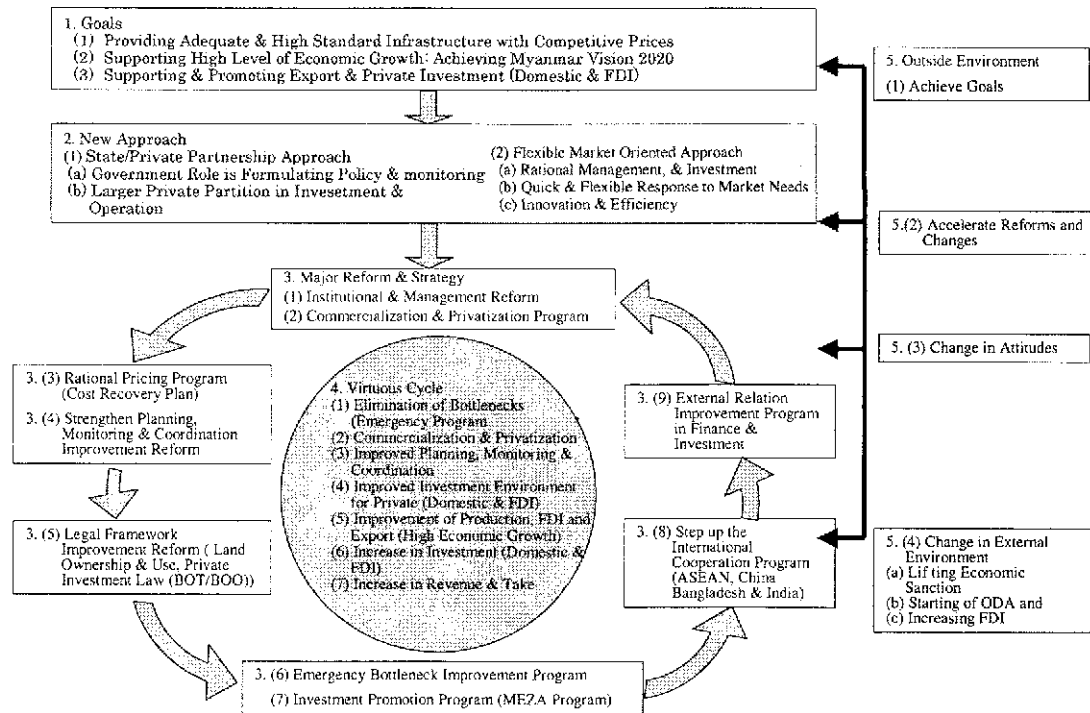
If Myanmar decides to implement the MEZ/BOT urgent plan, Myanmar is lacking experience and expertise in this area; Japan should assist Myanmar to implement the plan successfully.

Figure 6-16 Medium to Long Term Reforms for Infrastructure Sector

- (1) Increase in Investment Capital to meet \$140 billions Requirements by 2020
 - 1) Increasing profit from SOE by increasing
 - 2) Increasing private participation by introduction of
 - 3) Increasing external finance (ODA, OOF and Bank
- (2) Institutional & Regulation Reform
 - 1) Separation of Ministry &
 - 2) Commercialization of SOE (later
- (3) Pricing & Taxes Reforms
 - 1) Rationalization of pricing (Cost
 - 2) Rational taxes from infrastructure
- (4) Manpower Reform
 - 1) Improving planning, policy & monitoring skill
 - 2) Management skill up by

Source: JICA Study Team

Figure 6-17 New Virtuous Cycle with New Approach for Infrastructure in Myanmar



Source: JICA Study Team