

# A STUDY ON INDUSTRIAL SUB-SECTOR DEVELOPMENT IN THE REPUBLIC OF INDONESIA

Part I  
Review of Policies Related to Industrial Sub-Sector  
Development

SECOND YEAR FINAL REPORT

DECEMBER 1991

JAPAN INTERNATIONAL COOPERATION AGENCY

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A Study on Industrial Sub-Sector Development in the Republic of Indonesia Part I Review of Policies Related to Industrial Sub-Sector Development December 1991

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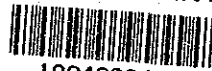
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## PREFACE

In response to a request from the Government of the Republic of Indonesia, the Government of Japan decided to conduct a study on Industrial Sub-sector Development in the Republic of Indonesia and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Indonesia a study team headed by Mr. Fumio Inui, Japan External Trade Organization, three times between September 1990 and August 1991.

The team held discussions with the officials concerned of the Government of Indonesia, and conducted field surveys at the study area. After the team returned to Japan, further studies were made and the present report was prepared.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Indonesia for their close cooperation extended to the team.

December, 1991



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Kensuke Yanagiya  
President  
Japan International Cooperation Agency



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## Summary

### 1. Outline of Selected Subsectors

- (1) The fifth five-year plan (Repelita V) started smoothly. The growth rate of the industrial sector in the first fiscal year (from April to March) of 1989/90 amounted to 8.9 percent against the targeted 8.5 percent. Export also grew 17.9 percent against the target of 15.0 percent.
- (2) Since the middle of the 1980s, Indonesia has made efforts to promote export of non-migas products. To realize the object, the country has made the development of export industry one of its preferential policies. The three industrial subsectors of ceramics, aluminum and plastics -- in the second-year survey -- are relatively new in Indonesia but have made a remarkable growth lately.

#### Industrial Sector Development (large and medium-sized companies)

	1983	1988	Average annual growth (%)
<b>Total</b>			
Number of establishment	8,027	14,664	12.8
Number of persons engaged (1,000)	1,120	2,065	13.0
Value of gross output (billions of rupiahs)	11,658	43,753	30.3
<b>Ceramics manufacturing industry</b>			
Number of establishment	28	53	13.6
Number of persons engaged (1,000)	9	16	11.4
Value of gross output (billions of rupiahs)	30	134	34.9
<b>Manufacture of fabricated metal products</b>			
Number of establishment	366	592	10.0
Number of persons engaged (1,000)	45	68	8.4
Value of gross output (billions of rupiahs)	521	2,437	36.1
<b>Manufacturing industry of plastic wares</b>			
Number of establishment	289	654	17.7
Number of persons engaged (1,000)	29	63	16.4
Value of gross output (billions of rupiahs)	152	1,110	48.8

Source: Compiled from industry statistics of the Central Statistics Bureau (BPS)



- (3) Export of products of the three industries has grown greatly since 1987. Export of ceramic products in 1990 increased sevenfold from 1987. Exports of aluminum structural products and housewares grew forty-five fold in the same period, and export of plastic products rose fivefold. The value of export, however, is considerably lower yet than that of Asian NIEs, with that of many items still smaller than in China or some ASEAN nations.

### Indonesian Imports and Exports of Products Covered in the Survey

#### (1) Ceramic Products

(Unit: thousands of US dollars)

Year	Exports	Imports	Net exports	Trade specialization index
1985	415	3,269	-2,854	-0.77
1986	1,152	5,332	-4,180	-0.64
1987	4,319	3,380	939	0.12
1988	13,793	3,744	10,049	0.57
1989	27,227	4,486	22,741	0.72
1990	28,538	18,851	9,687	0.20

#### (2) Aluminum products (structural goods and household goods)

(Unit: thousands of US dollars)

Year	Exports	Imports	Net exports	Trade specialization index
1985	23	576	-553	-0.92
1986	82	3,034	-2,952	-0.95
1987	797	2,242	-1,445	-0.48
1988	11,244	1,549	9,695	0.76
1989	31,297	3,628	27,669	0.79
1990	35,745	2,903	32,842	0.84

#### (3) Plastic Products

(Unit: thousands of US dollars)

Year	Exports	Imports	Net exports	Trade specialization index
1985	593	17,147	-16,554	-0.93
1986	6,778	24,325	-17,547	-0.56
1987	9,121	17,208	-8,087	-0.31
1988	16,151	20,312	-4,161	-0.11
1989	28,286	25,626	2,660	0.05
1990	41,431	40,708	723	0.01

Source: Indonesian Foreign Trade Statistics

- (4) Factors responsible for the export growth of the products of the industries under survey are believed to include; [1] a stronger price competitiveness due to the rupiah's depreciation since September 1986, [2] effects of the export promotion policies, [3] the development of each individual industries, and [4] expansion of demand resulting from the economic growth in the industrialized nations and Southeast Asian countries. As for the factor mentioned in [3], investments by

The increased investments are appraised as effects of activities of firms which have become livelier due to the relaxation of controls and introduction of the market competition principle by the Indonesian government. Measures for promoting investments including foreign capital introduction and export are producing effects of expanding export.

- (5) Nurturing of the three industrial subsectors to be studied in the second year of this survey will continue during the fifth five-year plan period as well. Production and export targets of each products are as follows, with the export growth rates fixed fairly high.

**Production and Export Targets for the Three Industry Sub-sectors Covered by the Second-year Survey**

(Units: thousands of tons (production), thousands of dollars (exports))

	Production			Exports		
	Final year of REPELITA IV	Final year of REPELITA V	Average annual growth rate (%)	Final year of REPELITA IV	Final year of REPELITA V	Average annual growth rate (%)
Ceramics products	138,090.0	200,000	7.7	13,240.0	51,788	31.4
Metal household goods	30.6	52	11.2	11,164.5	56,909	38.5
Plastic bags	11.3	22	14.3	3,095.4	12,447	32.1

Note: Metal household goods include steel, stainless steel, and aluminum products.

Source: Ministry of Industry, Fifth Five Year Development Plan (1989/90 - 1993/94) in the Industry Sector, January 1990

## 2. Policy Recommendation

- (1) Achievement of the targets mentioned in (5) above are believed possible because of the development of industry during the latest few years, particularly the expansion of productive capacity of firms including foreign capital affiliates as well as the high-pitched increase of export and the results of the field survey which show the firms' strong intentions to export in the future. The possibility of development is believed high because the country is blessed with abundant raw material resources, has comparative advantage in the field of labor-intensive products, and the domestic market is expected to expand. To turn such possibility into a certainty and realize a sustained expansion of export, however, individual industries have to solve various issues each of them is faced with and strengthen their competitiveness, while the government is required to put policies supporting them into practice.

Taking severe international competition into account among Asian NIEs, other ASEAN countries, China, etc. in overseas market, Indonesian subsector industries are required to strengthen their competitiveness both in price and non-price factors for the export expansion of their products, especially.

- (2) Issues the three industrial subsectors to be surveyed are faced with in expanding export, measures to solve them and overall promotion measures are to be described later by subsector industry. The main issues common to all the three industrial subsectors include; [1] strengthening of non-price competitiveness chiefly through quality improvement, [2] the introduction of export marketing, and [3] manpower training. Measures proposed to solve them include strengthening of the public support system based on the expansion of the existing related organs as well as efforts by firms. As for bigger issues, the measures call for the improvement of infrastructure and consideration of prevention of environmental pollution.
- (3) Augmentation and strengthening of related R&D institutes under Ministry of Industry are proposed for each industrial subsector as a core development program of the public support system. Present activities of these R&D institutes are evaluated not sufficient enough for the development of industrial subsectors. It is recommended, therefore, that related R&D institutes augment and strengthen their functions including testing, inspection, manpower training, research and development, standardization, etc., and assistances to companies or private sectors. Existing public organizations related to investment and export promotion are proposed to strengthen their activities as well. Moreover, as one of the measures to activate operation of public agencies including governmental research and development institutes, orientation toward the introduction and strengthening of business revenue through the payment by the beneficiaries and others is suggested.
- (4) Establishment of policy coordinating functions is called for as a prerequisite to measures for strengthening the public support system. In promoting Indonesian industry, it is necessary to provide unified, public support over all fields from the procurement of materials to promotion of foreign investment and export marketing. Toward this end, it is necessary to ensure cooperation and coordination among the related Ministries and agencies, such as the Ministry of Industry, BAPPENAS, the BKPM, the Ministry of Trade, the NAFED, the Ministry of Mining and Energy, the Ministry of Manpower, etc. in accordance with the content of the various public support activities.
- (5) In the present government policies, there is no restriction of investment and foreign trade for three industrial subsector industries. Further, there are no differences currently with types of industry in investment promotion measures and the export

incentive system. In addition to the existing policies, this survey suggests; [1] reduction of import tariffs on raw materials, intermediate goods and machinery and equipment (aluminum sheet, for instance), [2] promotion of plant and equipment investments by the expansion of incentives, and [3] utilization of two-step loans from overseas (particularly toward export-oriented firms or small and medium enterprises).

- (6) The promotion of foreign investment and technological tie-ups is an effective measure for the development of industrial subsectors and the expansion of their exports. The questionnaire surveys in Indonesia and Japan show that both Indonesian and Japanese enterprises have intentions of joint venture investments and technological tie-ups in Indonesia. To realize these intentions, strengthening of activities focused on subsector industries is proposed to BKPM and other related agencies.
- (7) To attain internationally competitive position amid the environment of severe competition, the Indonesian government and private industry have to unite their efforts. Without making efforts on their own, little hope for development could be held even with assistance from foreign nations. As for the implementation of the programs proposed here, it is important that the Indonesian side take the initiative and start the work feasible by their side through their own efforts.

## 1-1 Industrial Development Policy

### 1-1-1 Results of the First Year of the Fifth Five-Year Plan

Indonesia inaugurated its fifth five-year plan (REPELITA V) in fiscal 1989/90. The results of the first year of implementation, based on the Budget Message delivered in January 1991, were as indicated below.

Production by the industrial sector grew 8.9% over the previous year to a total of 65,796,400 million rupiahs. Exports of industrial products grew 17.9% over the previous year to \$11,068 million. This figure can be broken down as follows: small-scale industrial products, \$1,020 million; multifarious industrial products, \$7,315 million; machinery and basic metal and electrical products, \$911.9 million; and basic chemical products, \$788.7 million. Domestic investment amounted to 16,771,400 million rupiahs, while foreign investment totaled \$4,037 million.

Value-based production in the machinery and basic metal and electrical sectors grew 13.95% over the previous year to 12,276,700 million rupiahs. Exports of these products also grew 27.1%. Local and foreign investment amounted to 1,509,900 million rupiahs and \$298.6 million, respectively, representing increases of 106% and 88% over the previous year. The number of employees jumped 244% from 25,891 to 89,209.

In the basic chemical products sector, value-based production grew 21.6% over the previous year to 7,836,700 million rupiahs. Exports also increased by 34.8%. Local and foreign investment amounted to 2,932,400 million rupiahs and \$2,465.2 million, respectively, representing increases of 17.5% and 61.1% over the previous year. The number of employees totaled 20,257.

In the multifarious manufacturing sector, production amounted to 35,319,000 million rupiahs. Exports also increased by 20.6%. Local and foreign investment totaled 12,329,000 million rupiahs and \$1,273.7 million, respectively. The number of employees increased by 85,032.

In the small-scale manufacturing sector, value-based production grew 7.1% over the previous year to 10,364,000 million rupiahs. Exports increased by 6.7%. The number of employees grew by 220,064.

The Table below compares these results with the objectives set out in REPELITA V.

**Table 1-1-1: Industrial Sector Development**

REPELITA V target (annual growth)	First-year result
Industrial sector growth rate	8.5%
Increase in exports.	15.0%

It can be seen from the above that the five-year plan has gotten off to a good start in its first year.

## 1-1-2 Industrial Sector Development

The Table below provides a summary of development conditions for the entire industrial sector during REPELITA IV.

**Table 1-1-2: Industrial Sector Development (large and medium-sized companies)**

	1983	1988	Average annual growth (%)
Number of establishment	8,027	14,664	12.8
Number of persons engaged	1,119,630	2,064,689	13.0
Ave. number of persons engaged per establishment	139	140	0.1
Employment cost (billions of rupiahs)	914	2,836	25.4
Employment cost per capita (million of rupiahs)	0.81	1.37	11.0
Input cost (billions of rupiahs)	7,665.5	29,879.4	31.3
Value of gross output (billions of rupiahs)	11,657.6	43,753.2	30.3
Gross output per capita (millions of rupiahs)	10.4	21.2	15.2
Total value added (billions of rupiahs)	3,991.1	13,873.8	28.3
Value added per capita (millions of rupiahs)	3.58	6.72	13.5
Input to out put ratio	0.66	0.68	—

Source: Compiled from industry statistics of the Central Statistics Bureau (BPS)

The following section will examine development achieved during REPELITA IV for the industrial subsectors covered by the present report.

### (1) Ceramics Industry

Conditions in the ceramics industry will be examined based on BPS industrial classification numbers 36110 (Manufacture of Ceramic and Porcelain).

**Table 1-1-3: Development at Ceramics Manufacturing Industry**

(Industrial classification number 36110; large and medium-sized companies)

	1983	1988	Average annual growth (%)
Number of establishment	28	53	13.6
Number of persons engaged	9,437	16,187	11.4
Ave. number of persons engaged per establishment	337	305	-1.9
Employment cost (billions of rupiahs)	6.4	18.9	24.1
Employment cost per capita (million of rupiahs)	0.67	1.16	11.6
Input cost (billions of rupiahs)	17.3	79.5	35.6
Value of gross output (billions of rupiahs)	29.8	133.5	34.9
Gross output per capita (millions of rupiahs)	3.2	8.2	20.7
Total value added (billions of rupiahs)	12.5	54.0	34.0
Value added per capita (millions of rupiahs)	1.3	3.3	20.5
Input to output ratio	0.58	0.59	—

Source: Same as Table 1-1-2

It can be seen from the Table that the ceramics industry has posted steady growth during the past five years. Average annual growth in total added value also exceeded the industry-wide average. Added value per employee, however, was less than half the figure for industry as a whole.

## (2) Aluminum Downstream Products Industry

BPS industrial statistics do not provide any specific figures for aluminum downstream products. Therefore, this section will examine conditions in the metal products and metalworking sector, based on industrial classification number 381 (Manufacture of Fabricated Metal Products Except Machinery and Equipment), together with the households products sector, based on industrial classification number 38113 (Manufacture of Kitchen Wares).



**Table 1-1-4: Development in Manufacture of Fabricated Metal Products**

(Industrial classification number 381; large and medium-sized companies)

	1983	1988	Average annual growth (%)
Number of establishment	366	592	10.0
Number of persons engaged	45,265	67,997	8.4
Ave. number of persons engaged per establishment	123	115	-1.3
Employment cost (billions of rupiahs)	41.7	129.5	25.4
Employment cost per capita (million of rupiahs)	0.92	1.90	15.6
Input cost (billions of rupiahs)	356.3	1,699.8	36.6
Value of gross output (billions of rupiahs)	520.9	2,436.8	36.1
Gross output per capita (millions of rupiahs)	11.5	35.8	25.5
Total value added (billions of rupiahs)	164.6	737.0	34.9
Value added per capita (millions of rupiahs)	3.6	10.8	24.5
Input to output ratio	0.68	0.69	—

Source: Same as Table 1-1-2

The various indices for the metal product were higher than those for industry as a whole. Added value, in particular, grew at an extremely fast pace. The increase in the number of employees, however, was lower than for industry overall. The input to output ratio was roughly equivalent to the industry-wide figure.

**Table 1-1-5: Development of Manufacturing Industry of Kitchenwares**

(Industrial classification number 38113; large and medium-sized companies)

	1983	1988	Average annual growth (%)
Number of establishment	56	59	1.0
Number of persons engaged	6,213	8,102	5.5
Ave. number of persons engaged per establishment	111	137	4.3
Employment cost (billions of rupiahs)	2.8	6.9	19.8
Employment cost per capita (million of rupiahs)	0.45	0.85	13.5
Input cost (billions of rupiahs)	11.0	42.1	30.8
Value of gross output (billions of rupiahs)	17.3	65.5	30.5
Gross output per capita (millions of rupiahs)	2.8	8.1	23.7
Total value added (billions of rupiahs)	6.3	23.4	30.0
Value added per capita (millions of rupiahs)	1.0	2.9	23.7
Input to output ratio	0.64	0.64	—

Source: Same as Table 1-1-2

Growth in the number of employees at kitchenware manufacturers remains low in comparison with industry as a whole, and added value per employee is only about one-fourth the figure recorded by the metal products sector.

### (3) Plastics Products Industry

Conditions in the plastics industry will be examined based on industrial classification number 35600 (Manufacture of Plastic Wares); those in the plastic bag and gunny sack sector, based on industrial classification number 32115 (Manufacture of Gunny and Plastic Bags).

**Table 1-1-6: Development of Manufacturing Industry of Plastic Wares**

(Industrial classification number 35600; large and medium-sized companies)

	1983	1988	Average annual growth (%)
Number of establishment	289	654	17.7
Number of persons engaged	29,332	62,677	16.4
Ave. number of persons engaged per establishment	101	96	-1.0
Employment cost (billions of rupiahs)	16.0	61.0	30.7
Employment cost per capita (million of rupiahs)	0.54	0.97	12.4
Input cost (billions of rupiahs)	111.5	891.4	51.5
Value of gross output (billions of rupiahs)	152.0	1,110.0	48.8
Gross output per capita (millions of rupiahs)	5.2	1Z	27.8
Total value added (billions of rupiahs)	40.5	218.6	40.1
Value added per capita (millions of rupiahs)	1.4	3.5	20.1
Input to output ratio	0.73	0.80	—

Source: Same as Table 1-1-2

Manufacturers of plastic products have posted extremely high growth. The number of employees has also increased significantly together with total added value for the industry. Added value per employee, however, remains low, and input to output ratio is actually growing worse.

**Table 1-1-7: Development of Plastic Bag and Gunny Sack Manufacturing Industry**

(Industrial classification number 32115; large and medium-sized companies)

	1983	1988	Average annual growth (%)
Number of establishment	24	30	4.5
Number of persons engaged	11,622	13,325	2.7
Ave. number of persons engaged per establishment	484	444	-1.7
Employment cost (billions of rupiahs)	7.3	12.6	11.5
Employment cost per capita (millions of rupiahs)	0.62	0.94	8.6
Input cost (billions of rupiahs)	22.4	59.6	21.6
Value of gross output (billions of rupiahs)	37.3	89.4	19.1
Gross output per capita (millions of rupiahs)	3.2	6.7	15.9
Total value added (billions of rupiahs)	14.9	29.8	14.8
Gross output per capita (millions of rupiahs)	1.3	2.2	11.1
Input to output ratio	0.60	0.67	—

Source: Same as Table 1-1-2

This sector is characterized by the large number of employees per establishment (445), which is more than three times the industry-wide average of 140 for large and medium-sized companies. Added value per employee, however, is only one-third the average for industry as a whole.

### 1-1-3 Development Targets by Industry Sector

The development targets for each industrial sector as set out in REPELITA V are shown below.

**Table 1-1-8: Development Targets Set Out in the Fifth Five-year Plan**

	Average annual growth (%)	Export value in final year (billions of dollars)	Newly created jobs (five-year total)
Multifarious industry sector	10.42	12.69	730,000 (146,000/year)
Basic chemical sector	13.0	1.43	35,000 (7,000/year)
Machinery and basic metals and electrical sector	18.0	1.08	35,000 (7,000/year)
Small-scale industry sector	10.0	2.10	1,500,000 (300,000/year)

Source: Compiled from REPELITA V

It can be seen that, from the standpoint of new job creation, the contribution of the small-scale industry and multifarious industry sectors is very large. From the perspective of exports, the multifarious industry sector plays by far the greatest role. During 1989, the first year of REPELITA V, actually-created new jobs totaled 922,962, more than twice as many as the target figure of 460,000.

#### 1-1-4 Perspectives for Industrial Subsector Development

The industrial subsectors covered by this report are characterized by lower added value than industry as a whole. When compared with industry-wide figures, for example, production per employee and added value per employee are both far lower for the ceramics industry. Consequently, increasing added value will be critical to the development of the ceramics industry. This is true for the other two sectors as well.

In terms of supply, increased added value will require the reduction of raw material costs. In addition, the possibility of increasing the capital equipment ratio per laborer must also be examined. Utility costs must be cut. In the field of government policy, tariffs and distribution costs for imported raw materials must be cut, credit measures introduced to promote capital investment, tax incentives created, and various measures to secure stable supply of low-cost and good quality energy be established.

It will also be important to increase revenues by improving marketing strategies and techniques. The development of high-quality products will be an indispensable step in such efforts. Moreover, new marketing strategies based on accurate and wide-ranging market information must be drawn up and implemented. Possible government roles in these efforts include the establishment of public research facilities for the promotion of corporate research and development, the supply of market information, and the creation of programs for fostering the expert personnels in international marketing activities.

#### 1-1-5 Present Situation and Problems of Business Infrastructure

For the development of the sub-sector industries, the promotion of technological collaboration between Indonesian firms and foreign firms and the establishment of joint venture companies are recommended in this report. The existence of appropriate and adequate business infrastructure is an important factor in attracting foreign investment. The

adequate business infrastructure is an important factor in attracting foreign investment. The following is a review of the business infrastructure focusing on the supply of electricity and water which have great influence on manufacturing cost, as well as of the current situation of telephones and roads.

(1) Electricity

While electricity consumption in Indonesia in the 1970s increased about 20% per annum, growth has decreased to about 10% per annum in the mid of 1980s. However, it is considered that the potential demand is great, although the supply capacity is limited. While the rate of electrification as of March 1989 was 26%, it is planned that by the end of REPELITA V, in 1994, the rate of electrification will reach 40%. In view of the above situation, captive electric generation plays a very important role in Indonesian hospitals, airports, broadcasting stations, hotels and business enterprises. The share of captive electric generation is estimated to be about 40% among the total supply. Furthermore, the consumption of electricity is concentrated in Jawa Island, and about 80% of the total electricity supplied by PLN was consumed in Jawa Island.

The tariff rate of electricity is depends on the usage. The tariff is calculated based on the received and consumed quantity. Also a different tariff rate is applied according to the hour-range. In 1989, the tariff was increased to 25%. In Jakarta, the electricity is 50% cycles, single and three phase, and 220-380 voltage. The tariff of electricity for industrial use is determined by the volume of consumption. The tariff as of February 1990 was as follows:

**Table: 1-1-9: Tariff of Electricity (Feb., 1990)**

Category	Range of volume of consumption	Basic tariff (Rp/KVA)	Tariff of consumed electricity (Rp./ KWH)]	
			peak	off-peak
1-1 small scale/ low voltage	450VA-13.9KVA	3,460		68.0
1-2 medium scale/ low voltage	14KVA-200KVA	3,460	138.5	70.0
1-3 large scale/ medium voltage	more than 201KVA	3,160	134.0	68.0
1-4 large scale/ high voltage	more than 10,000KVA	2,960	119.5	60.0

Source: Indonesia Investment Guide 1990, ASEAN CENTRE and BKPM

## (2) Water

Potable water is relatively well supplied, and the rate of prevalence of potable water in the city area is about 70% and that in the rural area is about 85%. The volume of water supplied in 1985 was about 500 million cubic meters. The sewage system is still incomplete, although preparation for a better sewage system are on the way in ten major cities. About 200 cities maintain their own regulations on sewage in the interests of environmental protection. While the tariff on water for industrial use varies depending on the volume, it is in the range of Rp.350-600 per cubic meter.

## (3) Telephones and Telecommunication

Domestic telecommunication is operated by PERUMTEL and international telecommunication is operated by INDOSAT. The official installation charge for a telephone circuit is Rp.500,000. The number of registrations of telephones has rapidly increased, rising about 20% compared to the previous year, resulting in a total number of 828,812 in 1988. However, the number of people per one circuit is 211, which shows a very low rate of prevalence in comparison with that of the industrialized countries. The frequency of international telecommunication is increasing very much, almost doubling in 1987 in comparison with that in 1985 (from about 4 million times to about 8 million times).

In order to comply with the rapid increase of demand for telephones and telecommunication, renovation and expansion of the telecommunication system is urgently required. Although efforts to install a new digital exchange system and to introduce an optical fiber system are being made in some limited areas, the current situation is at a far from satisfactory level to fulfill the demand. It takes a long time and is very expensive to install a telephone. The above is the reason that long distance calling including international connections is sometimes difficult in Indonesia. At the end of 1988, the number of foreign countries that can be connected simultaneously from Indonesia is 138, an increase of 11 countries over the previous year.

The utilization of communication facilities other than the telephone such as cable, telex, and facsimile is increasing at a very high speed, especially in communications with foreign countries.

## (4) Roads

While the total length of roads (not including small country roads) in 1984/85 was 199,707 km, this increased to 228,003 km in 1988/89, consisting of 12,594 km of national roads, 33,398 km of provincial roads, 152,168 km of regency roads, 29,589 km of municipal roads and 304 km of toll roads. About 40% of these roads are paved. Out of the total of 45,992 km of national and provincial roads, 27,480 km is in good condition, however the remaining roads are in bad condition with 1,305 km being in very critical condition.

As transportation by road is increasing very rapidly, the Indonesian government is making efforts to improve inland transportation through the construction of new highways, especially in the Jakarta area. In the REPELITA IV period, a total of 224 km of toll road was constructed, and in the REPELITA V period, the construction of 295 km toll road is planned.

The change in the numbers of motor vehicles over the 5 years from 1983 to 1988 is described in table 1-1-10.

**Table 1-1-10: Change in the Numbers of Motor Vehicles (1983-1988)**

Type of Vehicles	1983 (as of end December)	1988(as of end July)
1 Bus	160,260	334,741
2 Truck	717,873	1,012,770
3 Passenger Car	869,940	1,189,764
4 Motor Cycle	4,135,677	11,536,212

Source: REPELITA V

#### (5) Problems of Business Infrastructure

Based on the analysis of the cost structure of the sub-sector industries dealt with in this report, it is disclosed that the utility costs that the Indonesian industries have to pay occupy relatively high shares among manufacturing cost. In addition to the above, an insufficient utility supply puts the Indonesian manufacturing industry in a disadvantageous position. Also it is said that if the present rate of economic growth continues, the great demand-supply gap of utility will already have occurred in the mid-1991.

While the private enterprises are entering the electricity supply field, captive generation within each individual organization will continue to play an important role. This is also the another burden for the individual firm as it has to bear the additional investment cost as well as high operating cost. Furthermore, the supply of water for industrial use is not adequate in terms of quality and quantity. The current road situation is also problematic for appropriate transportation and distribution of the commodities from the manufacturing site to end users. The improvement of the transportation conditions, especially the roads is urgently needed.



## **1-2 Investment and Trade Policy**

### **1-2-1 Foreign Investment and the Expansion of Exports**

The Indonesian economy achieved high growth of 7.4% in 1989 and in 1990. Both figures were considerably higher than the average annual growth target of 5.0% laid down in the fifth five-year plan (REPELITA V). Factors contributing to this growth included increased exports and greater investment, with exports of non-migas products and foreign direct investment playing an especially large role. Some of the main factors behind the increase in exports of non-migas products were the improved export competitiveness brought about by the devaluation of the rupiah since September 1986, the progress of industrialization, and the increase in foreign and domestic investment.

In the background of these economic activities was the government's decision to relax restrictions, a policy aggressively promoted from the later years of the fourth five-year plan (REPELITA IV). Export promotion policies for non-migas products and policies to promote foreign direct investment are also thought to be having some effect. Furthermore, the investment climate in Indonesia has been regarded relatively improved among Asian countries, by reflecting changes of relative production factor costs including labor costs in addition to the political stability in Indonesia.

Indonesia has designated the sixth five-year plan (1994/95 - 1998/99) as a "takeoff period" for its economy, and the present plan is considered a period of preparation for this. In addition to the ongoing relaxation of various restrictions, the government will continue to promote the non-migas industry and export expansion. Investment promotion policies will focus on foreign direct investment.

Foreign direct investment plays an important role in promoting export-led industrialization. Direct investment in the manufacturing industry involves not only the transfer of capital but also the transfer of comprehensive management resources related to all production elements -- people, goods, money, technology, and information -- together with the transfer of production technology, management techniques, and marketing know-how. In most cases, moreover, it does not necessitate going into debt. Consequently, foreign direct investment is expected to make a significant contribution to the development of export industries.

Recently, direct investment in Indonesian manufacturing industries has focused increasingly on export-oriented industries and has contributed to the expansion of Indonesian industrial product exports. To take the case of Japanese companies in the industry subsectors covered by the second-year survey, aluminum sashes and sanitary ware are good examples. In addition, although this does not involve direct investment, an increasing number of Japanese companies are providing technology for licensed production and exports of specially-developed products to the Japanese market.

Japanese firms are increasing direct investment in Asian manufacturing industries, and locally they are increasing their emphasis on production for export. According to a study conducted by the Ministry of International Trade and Industry, Asian sales by Japanese-affiliate manufacturers consisted of 66.9% local shipments and 33.1% exports in fiscal 1983/84, while for fiscal 1989/90 the figures were 63.9% and 36.1%, respectively. The share of exports to Japan grew from 10.8% to 15.8% during this period; to within the

Asian region, from 8.2% to 9.7%; to North America, from 8.2% to 6.0%; and to Europe, from 3.1% to 3.3%. Thus exports to Japan and the Asian region are on the rise.

The favorable cycle of direct foreign investment, industrial development, and export-oriented industrialization provided the motive force for dynamic economic growth in the Asian NIEs. This tide is now reaching ASEAN shores, and in Indonesia as well a favorable cycle of foreign direct investment and export expansion is now being established. In order to reinforce this trend, efforts to relax restrictions will be continued while at the same time stepping up efforts to attract investment by foreign companies.

Two of the main reasons behind increased foreign direct investment in Indonesia have been the relaxation of restrictions and government measures to attract investment. Details of these policies were reviewed in the first-year report, so the current report will indicate the recent development of foreign investment and make some comments on investment attraction policies based on the results of the second-year survey.

### **1-2-2 Recent Trends in Foreign Investment and Exports of Non-migas Products**

During the past several years the ASEAN nations have achieved rapid economic growth, driven by increased capital investment, mainly in the form of direct investment from Japan and the Asian NIEs, and healthy export performance. In 1990 a distinct gap could be seen between oil-producing and non-oil-producing nations as a result of the crisis in the Gulf, but all nations other than the Philippines continued on a course of healthy economic growth. The forecast for 1991 is also generally favorable, despite some effect from the slowdown in the world economy.

The Indonesian economy began to recover in 1986, recording modest growth of 4.0% and 3.6% in 1986 and 1987 only to be followed by rapid increases of 5.7% in 1988 and 7.4% in 1989. In 1990 as well, the country's economy grew by 7.4%, boosted by a significant increase in capital investment by foreign and local companies, greater exports, and rising individual consumption. Although there is a possibility of a slowdown in 1991 due to government fiscal restraint, investment by foreign and local firms, exports (particularly of non-migas products), the price of crude oil, and domestic consumption will provide the keys.

#### **1) Trends in Foreign Investment**

Foreign investment in Indonesia began a steep rise in 1988, and significant growth continued on into 1990 (see Table 1-2-1). In 1990, there were 608 cases of BKPM-approved new and expansion investment totaling \$8,750 million, representing increases of 65.7% and 85.4%, respectively, over the previous year. New investment accounted for 432 projects and \$5,840 million, increases of 46.9% and 55.7% over the previous year; expansion investment, for 176 projects and \$2,911 million, increases of 2.4-fold and three-fold.

The main characteristics of this increase in foreign investment are as follows:

- (1) Greater interest is being shown by foreign investors in Indonesia as a production base, including export production. The wave of foreign investment which swept Thailand and Malaysia during the second half of the 1980s is now reaching the shores of Indonesia.

- (2) When viewed by nationality, investment by Japan and the Asian NIEs -- the Republic of Korea, Taiwan, Hong Kong and Singapore -- is on the rise, accounting for more than half of all investment in 1990. Investment by manufacturers from these countries/regions is characterized by the presence of many export-oriented plants. In addition, many of these projects involve the transfer of production of labor-intensive goods, which are fast losing their competitiveness at home.
- (3) In terms of industry sectors, labor-intensive fields such as textiles are the most common, but large projects from the petrochemical sector and infrastructure-related ventures such as industrial parks have also appeared. In addition, investment by small and medium-sized corporations is also on the rise.

Local investment by Indonesian corporations also increased in 1990. BKPM-approved investment totaled 1,844 projects and 59,878.5 billion rupiah, significant increase over the 1,061 projects and 19,686.7 billion rupiah recorded in the previous year.

Judging from approved investment for the first quarter of 1991, investment, both foreign and local, appears to be growing at a healthy pace, and this is expected to continue throughout the year. There are concerns, however, that the following factors will have an adverse effect on investment:

- (1) Communications, electrical power and other facets of the infrastructure have been hard-pressed to keep up with the recent investment boom. In addition, land prices and rents have skyrocketed in and around Jakarta.
- (2) There is a shortage of technicians and skilled laborers, and the country is unable to keep pace with increased demand.
- (3) Fiscal restraint policies are being maintained in order to restrain inflation and discourage speculative dollar buying. If these policies are continued, they may discourage local firms in particular from carrying out planned investment projects.

Investment, including foreign investment, will play a major role in the future economic development of Indonesia. From this standpoint, the continued expansion of investment will require stable management of the economy and improvement of the business environment in terms of infrastructure, manpower training, etc. If investment does drop off, reinstatement of the corporate tax incentive which was abolished in the early 1980s might be considered.

**Table 1-2-1: Foreign Investment in Indonesia**

(Unit: millions of US dollars)

	1986	1987	1988	1989	1990	1967-1990
Japan	80	554	318	769	2,241	9,667
Hong Kong	15	129	258	407	993	3,731
U.S.	144	80	672	348	154	2,175
The Netherlands	33	122	112	283	567	1,962
(West) Germany	17	331	955	7	13	1,862
R. Korea	12	23	223	466	723	1,860
Taiwan	18	8	132	166	264	1,071
U.K.	45	9	94	43	58	1,292
Singapore	100	8	132	166	264	1,071
Others	269	54	531	1,632	2,296	8,946
<b>Total</b>	<b>848</b>	<b>1,481</b>	<b>4,409</b>	<b>4,719</b>	<b>8,750</b>	<b>38,678</b>

Note: Figures indicate the value of new and expansion investment approved by the BKPM.  
Source: BKPM

## 2) Exports of Non-migas Products

Until 1986, Indonesian exports were heavily dependent on oil and natural gas. Exports of non-migas products began to increase after the 1979 oil crisis, however, and in 1987 they had come to represent more than half of all exports by the country, exceeding even oil and natural gas. For the Indonesian government, which had been attempting a transition away from a petroleum-dependent economy vulnerable to market vicissitudes, 1987 proved to be the first year of dominance by non-migas exports (see Table 1-2-2).

Industrial goods were responsible for about 70% of all non-migas exports in 1990. The growth in industrial exports has made a great contribution to increased exports of non-migas products and hence of total exports. Factors behind this growth include the increased production capacity resulting from greater local and foreign investment coupled with enhanced competitiveness on the international market, brought about by the devaluation of the rupiah in the fall of 1986.

Exports of non-migas products, which posted rapid growth during 1987-89, slowed down in 1990. Non-migas exports in 1990 totaled \$14,604 million, an increase of only 8.3% over the previous year. This single-digit figure fell below the average annual growth target of 15.0% set out in Repelita V.

While exports of textiles, plywood, machinery, furniture and sundries grew at a high pace, shipments of primary products such as coffee and spices and industrial raw materials such as rubber, palm oil and aluminum ingots dropped. In addition, surging local demand for cement and paper resulted in lower exports of these products. Furthermore, the export expansion effect of the 1986 currency devaluation was probably wearing off.

Relatively high growth can be expected for exports of industrial goods such as textiles, machinery, furniture and sundries in 1991 as a result of structural factors such as

the increase in production capacity resulting from higher investment. Even if there are special procurements for the Gulf reconstruction, however, significant growth cannot be expected for exports of non-migas products, taking into consideration the slowdown of growth in the industrialized economies (i.e., income factors).

Exports of non-migas products and industrial goods in particular have come to play an important role in terms of both export performance and economic growth. Continued expansion of these exports will require the promotion of an export industry to follow textile products and processed wood products together with greater competitiveness in the subsectors covered by the present survey.

**Table 1-2-2: Indonesian Exports of Non-migas Products**

(Units: millions of dollars, %)

	Non-migas			Oil and gas			Total		
	Value	Growth over Previous Year	Share	Value	Growth over Previous Year	Share	Value	Growth over Previous Year	Share
1986	6,528	11.2	44.1	8,277	-34.9	55.9	14,805	-20.4	100
1987	8,580	31.4	50.1	8,556	3.4	49.9	17,136	15.7	100
1988	11,537	34.5	60.0	7,682	-10.2	40.0	19,219	12.2	100
1989	13,480	16.8	60.8	8,679	13.0	39.2	22,159	15.3	100
1990	14,604	8.3	56.9	11,071	27.6	43.1	25,675	15.9	100

Source: Indonesia Foreign Trade Statistics

### 1-2-3 Interest in Investment and Issues Documented in the Questionnaire Survey

From the recognition that foreign direct investment and technology transfer will play an important role in industrial sector promotion and development in Indonesia, opinions at Indonesian and Japanese firms for the three sub-sectors covered by the second-year survey were sounded out in the questionnaires. Tables 1-2-3 and 1-2-4 provide a summary.

The survey results show the following trends at Indonesian firms:

- (1) The desire for joint ventures with foreign companies is particularly notable among plastics firms. It was also notable among ceramics and downstream aluminum products manufacturers.
- (2) The greatest expectation of such joint ventures was technology transfer. Other expectations included access to overseas markets, management know-how, and fund raising assistance. Hopes for access to overseas markets, which in turn will lead to increased exports, were relatively large.
- (3) The list of desired joint venture partner countries was headed by Japan and also included the United States, the EC, and the NIEs. Those firms indicating NIEs are thought to be interested mainly in production of low and medium-priced products.

- (4) Japan and the NIEs were also frequently indicated as desired partners for technical tie-ups and technical cooperation.

Based on the summary results, the following things can be said of Japanese firms:

- (1) Concerning direct investment in Indonesia, concrete investment projects in the three sub-sectors were being examined at the time of the survey and were cited for future study as well.
- (2) The leading merits indicated for investment in Indonesia were the availability of labor and the labor cost. In many cases, firms hoped to take advantage of these merits to produce for export, including re-imports to Japan.
- (3) Numerous problems were also cited, including a lack of technicians and skilled laborers, the underdevelopment of related supporting industries, and the lack of an adequate infrastructure.
- (4) 20-30% of the responding firms in each of the three sub-sectors indicated that they were interested in accepting Indonesian requests for technology transfer.

The results of the above two questionnaire surveys confirmed that there was mutual desire at both Indonesian and Japanese companies for joint venture investment and technical tie-ups in the three industry sub-sectors covered by the second-year survey. In order to realize these desires, the BKPM and other related organizations will need to contact interested firms (a list of these firms is included in the sub-sector report).

In the questionnaire survey, many Japanese firms noted the great improvements made in the Indonesian investment environment while at the same time commenting that the current situation was not as well known as in other ASEAN nations. Taking this into consideration, further Indonesian activities to attract foreign investment are needed, including the holding of investment seminars, the distribution of investment guidebooks, and the dispatch of investment attraction missions to home countries such as Japan and Asian NIEs. It is also advisable that basic information be disseminated to potential investors when requested. According to Japanese questionnaire survey, potential investors are trying to get such information as demand and supply trends of the product to be manufactured and lists of locally available materials, parts / components etc. in Indonesia.

In the medium to long term, measures are to be taken to deal with the already apparent lack of infrastructure and qualified personnel. The rapid expansion of the Indonesian economy has led to crowding of the roads around Jakarta, a shortage of electrical power and telephones, and a lack of skilled laborers, foremen, and mid-level management. Unless resolved, these problems will not only hinder the attraction of foreign investment but will have an adverse impact on economic development as a whole.

**Table 1-2-3: Interest Expressed by Indonesian Companies in Joint Ventures, Technical Tie-ups, and Export Expansion**

	Ceramics products	Downstream aluminum products	Plastic products
1. Number of effective responses	26	24	42
2. Joint ventures with foreign companies			
1) Interested in joint venture	26	24	42

Yes	9	6	30
No	10	8	7
No response	7	10	5
2) Expectations of joint venture	50	38	87
Technology transfer	14	10	26
Access to overseas markets	9	8	26
Management know-how	9	3	12
Fundraising assistance	6	3	13
Other	0	1	0
No response	12	13	10
3) Desired joint venture partner	21	26	53
Japan	6	5	26
United States	1	3	2
EC	2	2	3
NIEs	3	3	13
Other	1	2	4
No response	8	11	5
3. Technical tie-ups, technical cooperation			
1) Interested in technical tie-up	26	24	42
Yes	10	12	7
No	11	9	30
No response	5	3	5
2) Desired tie-up partner	21	18	13
Japan	6	5	4
United States	0	2	0
EC	2	3	1
NIEs	5	2	3
Other	0	1	0
No response	8	5	5
3) Need for technical cooperation	26	24	42
Yes	16	14	27
No	3	4	11
No response	7	6	4
4) Technical cooperation partner	32	34	48
Japan	12	11	21
United States	1	3	0
EC	4	4	2
NIEs	4	8	13
Other	1	1	4
No response	10	7	8
4. Exports			
1) Have exported in the past	26	24	42
Yes	12	12	15
No	11	12	22
No response	3	0	5
2) Interested in expanding exports	26	24	42
Yes	13	16	29
No	1	3	3
No response	12	5	10

Notes: (1) Questions 2.2, 2.3, 3.2, and 3.4 allowed multiple responses.

(2) "Other" in questions, 2.3, 3.2, and 3.4 includes other ASEAN nations.  
 Source: Questionnaire surveys in Indonesia

**Table 1-2-4: Interest Expressed by Japanese Companies in Direct Investment and Technical Tie-ups with Indonesia Firms**

	Ceramics products	Downstream aluminum products	Plastic products
1. Number of effective responses	123	85	53
2. Past experience and interest in direct investment			
1) Number of firms which have carried out foreign direct investment in the past	12	23	14
2) Currently studying concrete proposals for direct investment (future possibility)	8 (17)	18 (17)	6 (5)
Indonesia	4 (5)	3 (4)	4 (2)
Malaysia	2 (5)	1 (2)	0 (0)
Thailand	1 (1)	4 (4)	2 (1)
Other (including undecided)	1 (6)	10 (7)	0 (3)
3) Main reasons for investment	40	39	15
Access to local markets	7	17	4
Exports production base	16	9	2
Re-imports to Japan	15	11	8
Other	2	2	1
4) Merits of investment in Indonesia	92	93	48
Raw material supply	4	7	2
Availability of labor	32	31	17
Labor costs	33	38	16
Access to the Indonesian market	4	6	4
Export production base	13	7	5
Other	6	4	4
5) Problems with investment in Indonesia	104	107	53
Shortage of technicians and skilled laborers	28	41	20
Difficulty of obtaining high-quality local materials; high cost of imported raw materials	21	16	8
Underdevelopment of related industries	23	19	12
Lack of an adequate infrastructure	17	17	7
Lack of related facilities and systems for testing, inspection, standards, etc.	10	10	3
Other	5	4	3
3. Number of companies indicating the possibility of technology transfer to Indonesian firms	23	25	12

Notes: Questions 2.2-2.5 allowed multiple responses.  
 Source: Japanese questionnaire surveys



### 1-2-4 Export Promotion Policy

Indonesian exports of ceramics, aluminum, and plastic products have been on the upswing in recent years. This trend is expected to continue into the future, but the continued expansion of exports and promotion of these sub-sectors as export industries will require the promotion of non-price competitiveness (mainly in the area of quality control) in addition to price competitiveness and government policy assistance.

Exports of representative products by the three sub-sectors have been increasing rapidly since 1987. Concerning OECD imports originating in the Asian region, exports from Indonesia have increased dramatically since 1987, but the value of these shipments remains limited when compared with figures for the Asian NIEs, some ASEAN nations, and China (Table 1-2-5).

**Table 1-2-5: Indonesian Exports and OECD Imports of Products Covered by the Survey**

#### 1. Ceramics products

(Unit: thousands of US dollars)

	1985	1986	1987	1988	1989
Total Indonesian exports	59	30	407	4,636	15,487
Total OECD imports (originating in Asia)	2,201,496	2,708,927	3,347,080	2,766,142	
ASEAN (5)	13,790	17,278	30,170	48,292	
Indonesia	84	82	153	1,443	
Singapore	531	876	1,351	1,362	
Malaysia	4,993	5,733	8,593	6,516	
Thailand	3,026	4,798	12,118	29,695	
Philippines	5,156	5,789	7,955	9,276	
NIEs (3)	405,221	509,307	778,722	380,305	
R. Korea	(5)91,123	(6)102,589	(7)138,554	(8)116,362	
Taiwan	(2)290,012	(3)375,140	(1)594,437	(5)235,503	
Hong Kong	24,086	31,578	45,731	28,440	
China	(7)69,904	(8)94,362	(6)153,841	(6)159,802	
Japan	(1)549,978	(1)553,569	(2)531,637	(2)411,241	

Note: Ceramics products are those in parentheses included in SITC code 666 (R2 through 1987 and R3 thereafter). The numbers in parentheses preceding the figures indicate the rank of that country among the top ten exporters to OECD nations.

## 2. Aluminum household goods

(Unit: thousands of US dollars)

	1985	1986	1987	1988	1989
Total Indonesian exports	23	55	454	5,115	12,035
Total OECD imports (originating in Asia)	184,957	254,288	349,765	423,524	
ASEAN (5)	775	1,166	1,920	8,318	
Indonesia	—	—	269	4,535	
Singapore	21	105	158	149	
Malaysia	6	2	13	3	
Thailand	740	1,045	1,467	3,631	
Philippines	8	14	13	26	
NIEs (3)	55,723	65,556	109,456	146,951	
R. Korea	(6)8,668	(6)14,018	(5)33,401	(4)51,292	
Taiwan	(3)25,723	(3)29,676	(4)37,608	(5)38,743	
Hong Kong	(4)21,332	(4)21,862	(3)38,447	(3)56,916	
China	437	491	719	1,565	
Japan	968	660	734	2,651	

Note: Aluminum household goods are those included in SITC code 69743 (R2 through 1987 and R3 thereafter).

## 3. Plastics products

(Unit: thousands of US dollars)

	1985	1986	1987	1988	1989
Total Indonesian exports	593	6,778	9,121	16,151	28,286
Total OECD imports (originating in Asia)	8,161,188	11,025,063	14,315,603	21,767,931	
ASEAN (5)	72,043	85,251	130,453	196,824	
Indonesia	844	1,195	2,107	4,001	
Singapore	26,108	27,177	43,301	67,716	
Malaysia	7,308	9,182	13,409	24,808	
Thailand	29,944	39,560	62,230	90,751	
Philippines	7,839	8,137	9,406	9,548	
NIEs (3)	1,032,126	1,363,545	1,950,611	1,181,880	
R. Korea	108,826	158,058	264,786	175,036	
Taiwan	(3)623,595	(2)856,931	(2)1,264,897	(7)750,043	
Hong Kong	299,705	348,556	420,928	256,801	
China	32,961	56,170	144,779	107,516	
Japan	(10)322,371	(10)433,270	(10)489,422	243,059	

Note: Plastics products are those included in SITC code 893 (R2 through 1987 and R3 thereafter).

Source: Indonesia Foreign Trade Statistics and OECD Foreign Trade Statistics

Indonesian imports of products in the three sectors continued to fluctuate during the years from 1985 to 1990, while exports increased at a rapid pace. As a result, net exports of each product grew significantly. The trade specialization index shifted from minus to plus, and each of the products is seen to be shifting from import specialization to export specialization (Table 1-2-6). Although it is impossible to judge the international competitiveness of Indonesian products based on this index alone, it appears that these products have become more competitive during the 1985-90 period.

**Table 1-2-6: Indonesian Imports and Exports of Products Covered in the Survey**

(1) Ceramic Products

(Unit: thousands of US dollars)

Year	Exports	Imports	Net exports	Trade specialization index
1985	415	3,269	-2,854	-0.77
1986	1,152	5,332	-4,180	-0.64
1987	4,319	3,380	939	0.12
1988	13,793	3,744	10,049	0.57
1989	27,227	4,486	22,741	0.72
1990	28,538	18,851	9,687	0.20

(2) Aluminum products (structural goods and household goods)

(Unit: thousands of US dollars)

Year	Exports	Imports	Net exports	Trade specialization index
1985	23	576	-553	-0.92
1986	82	3,034	-2,952	-0.95
1987	797	2,242	-1,445	-0.48
1988	11,244	1,549	9,695	0.76
1989	31,297	3,628	27,669	0.79
1990	35,745	2,903	32,842	0.84

(3) Plastic Products

(Unit: thousands of US dollars)

Year	Exports	Imports	Net exports	Trade specialization index
1985	593	17,147	-16,554	-0.93
1986	6,778	24,325	-17,547	-0.56
1987	9,121	17,208	-8,087	-0.31
1988	16,151	20,312	-4,161	-0.11
1989	28,286	25,626	2,660	0.05
1990	41,431	40,708	723	0.01

Notes: (1) For breakdowns of the ceramic and aluminum figures, refer to the individual sector reports. Plastic figures are for those products falling under the SITC 893 classification.

(2) The trade specialization index is calculated as follows:

$(E_i - M_i) / (E_i + M_i)$ , where  $E_i$  signifies exports of product  $i$  and  $M_i$ , imports of product  $i$ .

Source: Indonesia Foreign Trade Statistics

Indonesian exports of ceramics, aluminum, and plastic products are expected to continue to increase, assuming that the world economy continues to grow at a steady pace (income factors) and that there are no major fluctuations in the price structure for domestic and foreign raw materials, etc (price factors). The reasons for this include the following: (1) greater investment has resulted in increased production capacity, and foreign direct investment in particular often leads to export-oriented production; (2) there are fields in which cost competitiveness can be utilized due to factors such as labor costs and exchange rates; and (3) although export efforts may be postponed during the coming two to three years as the result of buoyant domestic demand, the desire among Indonesian firms to increase exports is deep-rooted (Table 1-2-3).

Export targets have been set out in the current five-year plan (REPELITA V), and the figures for average annual growth are quite high (Table 1-2-7). When the previously-described trends are taken into account, it is thought that achievement of these targets is possible. In order to achieve these targets and continue export growth, however, the various problems facing the industry sub-sectors will have to be resolved, competitiveness improved, and suitable government promotion policies formulated.

**Table 1-2-7: Production and Export Targets for the Three Industry Sub-sectors Covered by the Second-year Survey**  
 (Units: thousands of tons (production), thousands of dollars (exports))

	Production			Exports		
	Final year of REPELITA IV	Final year of REPELITA V	Average annual growth rate (%)	Final year of REPELITA IV	Final year of REPELITA V	Average annual growth rate (%)
Ceramics products	138,090.0	200,000	7.7	13,240.0	51,788	31.4
Metal household goods	30.6	52	11.2	11,164.5	56,909	38.5
Plastic bags	11.3	22	14.3	3,095.4	12,447	32.1

Note: Metal household goods include steel, stainless steel, and aluminum products.

Source: Ministry of Industry, Fifth Five Year Development Plan (1989/90 - 1993/94) in the Industry Sector, January 1990

Increased export competitiveness will require greater competitiveness in both price and non-price factors. Given the results of the local survey, it is thought that the specified Indonesian products will remain cost-competitive for the time being, but continued expansion of exports will require greater non-price competitiveness (specifically, improved quality) and more effective marketing efforts.

With the exception of a few foreign affiliates and large corporations, quality control for Indonesian products remains insufficient at present. Limited awareness of the importance of quality control is coupled with a shortage of technicians at most companies. Outdated production facilities and poor testing and inspection equipment are also important factors. Consequently, government organizations and industry associations are to work harder to increase awareness of quality control train technicians. There is also a need for the renovation and modernization of production facilities and the introduction of testing and inspection equipment, and greater incentives for plant and equipment investment would be effective in this respect. These kinds of activities are particularly needed for small businesses, which lack sufficient capital resources.

Greater plant and equipment investment will lead not only to improved quality but also to improved productivity and cost competitiveness. Furthermore, it will provide an overall foundation for the concerned industry sub-sectors, including local sales as well as exports. To similar objectives, import duties on raw materials, intermediate materials, and major equipment used in production are recommendable to be reduced.

Government assistance policies for the improvement of export competitiveness should consist mainly of the plant and equipment investment promotion policies and reduction of import duties described above together with greater activities by government research organs and export promotion organizations. The activities of existing public research facilities are not sufficient; there is a need for the expansion of testing and inspection facilities as well as technical training and guidance. Export promotion organizations such as BPEN (NAFED), the Export Support Board, and IETC will also play an important role.

## **1-3 Financial Policy**

### **1-3-1 Changes in the Financial Environment since the First-Year Survey**

Indonesian financial policy has maintained a basic policy of relaxing restrictions and introducing the competitive principle. In terms of financial programs, there have been no significant changes since the January 29, 1990 package (hereafter referred to as PAKJAN) reported in the first-year survey.

On the other hand, the financial environment has undergone significant changes during the 1989/90 fiscal year as a result of the PAKJAN financial reforms, the rapid growth of the Indonesian economy, and changes in the world economic situation. In particular, interest rates, which had been gradually declining, began an upsurge in June 1990, and for a time the prime rate, which had fallen to 17-18%, rose to figures of 23-25% (Indonesian interest rates on both loans and deposits have been liberalized, and the prime rate differs from bank to bank). The primary cause of this rise in interest rates was the government tight monetary policy, but the following factors also came into play:

- **Outflow of capital**

The drop in substantial interest rates resulted in an outflow of rupiahs, and this surfaced as a reduction in foreign exchange reserves.

- **Fears of inflation**

Fueled by demand for investment, the local business environment continued to fare well. Prices, which for a time had remained stable, began to rise once again, bringing fears of inflation.

- **Abolition of liquidity credit**

Under PAKJAN, KIK/KMKP, KI/KIK and other liquidity credits (with the exception of KUPEDES) were abolished from April 1990, and the supply of low-interest fund from the central bank was cut off.

Concerning the capital market, the strong rush for companies to go public in fiscal 1989/90 resulted in a three-fold increase in the number of companies listed on the stock exchange, creating an excess of securities. This, coupled with rising interest rates, sent the value of the stock market down to about 40% of its peak value, thereby damping the market's rapid growth. Thus the environment for fundraising via the capital market has deteriorated.

### **1-3-2 Issues Related to Fund Raising from the Standpoint of Industry Sector Promotion**

In Indonesia, financial preferential treatment for specified industry sectors have been avoided (with a few minor exceptions such as foodstuffs, sugar, etc.) for the reason that such measures inhibit the formation of a free financial market. There are no special credit schemes for the six industry sectors targeted by the first- and second-year surveys, and financial problems can be characterized more by company size than by industrial sector. These problem areas will therefore be discussed in terms of company size rather than industry sector while touching on changes in the financial environment.

#### **(1) Fund Raising for Large Scale Corporations**

Under the current financial system, companies of which total assets exceeding 600 million rupiahs are classified as "large corporations." As a result, everything from large firms leading the country to smaller operations with only several tens of employees are classified in the same category as "large corporations."

At present, there are no financial preferential treatments for large corporations, and firms falling into this classification are faced with problems such as an absolute shortage of long-term funding and high interest rates. In particular, the subsectors covered in the present survey do not contain any of the country's largest corporations, and the difficulty of raising capital from foreign markets and the capital market (via the issuing of stock) make long-term, low-interest fundraising very difficult.

High interest rates (not only nominal rate but also real rate) and the difficulty in raising long-term fund are having a dampening effect on the enthusiasm for capital investment at Indonesian companies.

Although problems in fund raising were not the only reason, some of the companies interviewed were found to be using outdated equipment more than 20 years old, while others, when undertaking equipment investment, purposely chose inexpensive models despite their poor performance.

If a means of providing long-term, relatively low-interest financing could be found for subsectors requiring the modernization of facilities for improved product quality, this would have a favorable effect on their development.

## (2) Fund Raising for Small Businesses

Under the current financial system, companies having total assets of less than 600 million rupiahs are classified as "small businesses."

Implementation of PAKJAN has brought about significant changes in the financing environment for small businesses in comparison with 1989/90.

### a) The Impact of PAKJAN

Before PAKJAN, companies with total assets of less than 600 million rupiahs excluding occupied land and housings/buildings were eligible for low-interest liquidity credits such as KIK/KMKP and KI/KIK, but these liquidity credits were abolished under PAKJAN. In their place, guidelines was established that banks should set aside at least 20% of their loans outstandings for small business loans called KUK. In addition, the credit guarantee system by P.T. ASKRINDO, a nationally-owned credit guarantee company, changed from one which was automatically invoked to one which the banks decide on their own whether or not to use; in the future, insurance premiums will be set independently for each bank according to the percentage of irrecoverable loans made.

With the exception of those firms with which a bank has done business in the past and whose business operations are fully grasped by the banks, banks are becoming increasingly cautious when making new loans to small businesses, and even when loans are granted the interest rates take into account a high risk factor. The credit environment for small businesses is therefore a difficult one in terms of both fundraising and loan conditions; in many cases small business loans have annual interest rates exceeding 30%.



#### **b) New Credit Programs for Cottage Industries**

A new credit program for cottage industries to be implemented through informal self-help groups is now being tested in four provinces. The "Linking Bank with Self-help Group," as it is called, is an attempt to link cottage industries with banks through self-help groups. Since loans are limited to only 1 million rupiahs, however, the program cannot be expected to provide a major source of industrial funding.

### c) Development fund

Ministry of Finance Decree has been introduced to set aside 1 to 5% of net profit of state owned enterprises used as development fund for small-scale industries in Indonesia.

#### (3) Finance for Joint Venture Companies

Under current financial regulations, joint ventures receive the same treatment as large corporations, and they are under no special disadvantages in comparison with Indonesian firms. However, no joint venture bank has ever been designated to handle the two-step loans which are one of the few means of raising long-term funding in Indonesia. It is therefore very difficult for joint ventures to take advantage of these loans, and this is thought to have had an adverse effect on the attraction of foreign investment.

### 1-3-3 Background of Issues

The following types of factors are responsible for the problems described above.

#### (1) Factors in the Financial Market

The guiding principle of Indonesian fiscal policy has traditionally been careful control of the money supply with the objectives of controlling inflation and earning confidence in the rupiah. As a result, the fundraising costs for financial institutions are considerably high in both nominal rate and real rate.

#### (2) Factors in the Financial Institutions

Since the restrictions on establishment of banks were relaxed in the October 1988 policy package (PAKTO), commercial banks alone 43 banks were established in the two years up to October 1990, and the number of branch offices has increased by approximately 1,500 during the same period. In addition, funds held by all banks at the end of March 1989 totaled 39,500 billion rupiahs, but this figure had grown to 59,100 billion rupiahs one year later, indicating the dramatic growth now being experienced by the financial sector (table 1-3-1). On the other hand, Indonesian financial institutions are now facing the types of problems described below.

**Table 1-3-1: Outstanding Bank Fund**

(Billions of Rp.)

	State Banks	Private National Banks	Regional Development Banks	Foreign & Joint Ventue Banks	Total
1986 March	13,304	4,746	760	2,033	20,843
1987 March	15,225	5,899	748	2,188	24,060
1988 March	18,225	8,826	938	2,390	30,970
1989 March	23,859	11,832	1,184	2,628	39,503
1990 March	30,737	23,142	1,741	3,936	59,192

\*Excluding Rural Credit Banks

Source: Bank Indonesia

a) Shortage of Skilled Workers

The rapid increase in the number of banks and branch offices has left current training programs unprepared and resulted in a personnel shortage for Indonesian financial institutions. This shortage is particularly evident in the loan evaluation and foreign exchange-related sections of the industry. As a result, frequent headhunting has been reported among competing institutions. In some cases, therefore, financial institutions are unable to satisfy industry needs despite active efforts.

b) Shortage of Funds

Although Indonesian financial institutions have undergone rapid growth during recent years, their scale (with the exception of nationally-owned commercial banks) remains limited in comparison with those in other ASEAN nations (table 1-3-2), and they are as yet incapable of supplying the necessary funds to industry.

Table 1-3-2: Comparison of Private Banks by Total Assets (1988 Dec.)

(US\$ Million)

Rank	Indonesia	Malaysia	Thailand	Singapore	Japan ('89)
1	Bank Central Asia 1,393.8	Malayan Bank 8,581.9	Bangkok Bank 14,325.9	Development Bank of Singapore 10,514.3	Daiichi-Kangyo Bank 373,562.4
2	Bank Niaga 774.2	Bank Bumiputera Malaysia 7,787.2	Krung Thai Bank 6,973.7	United Overseas Bank 7,271.9	Sumitomo Bank 363,087.9
3	Bank Umum National 694.4	Public Bank 2,816.9	Thai Farmers Bank 6,264.8	Overseas Chinese Banking Co. 6,662.7	Fuji Bank 339,245.1
4	Bank Duta 626.4	United Malayan Banking Co. 2,427.1	Siam Commercial Bank 4,154.7	Overseas Union Bank 4,426.1	Mitsubishi Bank 331,716.8
5	Bank Bali 605.1	Development & Commercial Bank 1,428.9	Thai Military Bank 2,888.2	Tat Lee Bank 1,188.1	Sanwa Bank 324,270.8

Note 1: Conversion Rate: Average Rate of 1988 (Source: IFS)

1US\$ = 1685.7Rp.  
 = 2.6188M\$  
 = 25.294B  
 = 2.0124S\$  
 = 137.96¥(1989)

Note 2: Asset of state banks are as follows (US\$ million)

BNI1940	8,891
BBD	7,140
BRI	6,334
BDN	6,014
BBII	4,126
BAPINDO	1,803

Source: Bankers Handbook 1990

### c) Insufficient Means of Long-term Fundraising

Fundraising methods used by Indonesian banks are limited to a maximum two-year fixed deposit, but in actuality there are virtually no fixed deposits exceeding one year, and unless a bank receives two-step loans from overseas there is virtually no means of procuring long-term, rupiah-based funding. As a result, loans to industry consist mainly of short-term loans, and it is difficult to supply funds for investment, which requires long periods for investment recovery.

### (3) Factors in Corporate Management Performance

In addition to the financial market and financial institution-related factors described above, it was often found during both the first- and second-year's field surveys that problems in the management of the borrowing firms themselves was also an important factor resulting in high interest rates and the difficulty of borrowing necessary funds.

In Indonesia, a significant number of companies classified as large corporations as well as small businesses are unable of drawing up precise investment recovery plans when conducting capital investment and of presenting reliable bookkeeping to the financial institution. When faced with such companies, banks are forced to respond by either refusing the loan, charging high rates of interest for the high risk factor, or requesting more collateral than is normally required.

## 1-3-4 Financial Assistance Policies for Industrial Sector Promotion

### (1) Improvement in Long-term Fund Raising Scheme

High interest rates and the shortage of long-term funding, which constitute the greatest financial problems for each industrial sector, are partially rooted in the structure of the Indonesian financial market. Ultimately, resolution of these problems will require the development of a long-term capital market coupled with greater confidence in the rupiah through strengthening of the financial sector and economic fundamentals. All of these measures, however, will require much time. Indonesian Government is making efforts to develop banking sector and long-term capital market. But demands for long-term fund are also increasing rapidly, so long-term fund is still running short.

So, at present going public and raising fund in overseas market are only way to get long-term fund in low interest rate. But these ways are eligible only for very large scale companies and most of the companies in the subsectors of our study is not big enough. Two-step loans is a practical way for small companies to secure long-term funds. Table 1-3-3 shows the major two-step loans currently being disbursed as of October 1990.

According to the handling banks interviewed, they gave only quite small number of two-step loans to the 6 subsectors, while the needs is very keen. It is partly because funds of two-step loans are limited and loan procedures are not fully fit for satisfying prompt demand by industries.

When introducing the two-step loans, it would be preferable from the standpoint of sector promotion to limit the target firms to, for instance, the six subsectors included in the present survey to the extent that such measures do not create distortions in the Indonesian financial market as a whole. Furthermore, in order to introduce foreign funds without worsening the country's debt service ratio, the target firms might be limited to export-oriented corporations. Until now all of the banks handling the two-step loans have been Indonesian entities, but for those sectors in which the introduction of foreign capital is to be promoted or export is achieved mainly by joint ventures, the possibility of opening this field up to branch offices of foreign banks and financial institutions established as joint ventures might be considered.

Two-step loans, which provide long-term, stable funding, would be effective in resolving Indonesia's credit-related problems, but in some instances in the past the loan evaluation procedure took too much time. As a result, these loans were not necessarily well-received by handling banks. For the improvement of above situation two-step loans, SMIEP and the Japan Export-Import Bank have stationed supervisors for project evaluation in Indonesia, resulting in shorter times to loan disbursement and excellent evaluations. This might be of reference to those concerned when introducing two-step loans in the future.

In all of the two-step loans implemented until now, the foreign currency was exchanged into rupiahs by Bank Indonesia and then supplied to the handling banks; the recipient corporations, therefore, received their loans in rupiahs. For those firms with high export ratios and foreign exchange earnings, however, providing the loan in the form of foreign currency would lead to lower nominal interest rates. Therefore, a method of providing these loans in the form of foreign currencies is recommendable to be studied.

**Table 1-3-3: Outline of Two-step Loans Currently Being Disbursed**

Name of loan	Source	Amount (\$ million)	Handling banks	Targeted sector
(1) Export Development Project II	World Bank (IBRD)	165	5 state-owned commercial banks BAPINDO 2 private commercial banks (DUTA, NIAGA) 2 private development banks (UPIINDO, PDFCI)	Exporting corporations
(2) Industry Restructuring Project	World Bank (IBRD)	284	5 state-owned commercial banks BAPINDO 4 private commercial banks (DUTA, NIAGA, BALI Urum National) 2 private development banks (UPIINDO, PDFCI)	Renovation of paper, pulp, textile and engineering facilities
(3) Small & Medium Industrial	World Bank (IBRD)	100	4 state-owned commercial banks (BNI 1946, BRI, BED, BDN) BAPINDO 3 regional development banks (Central Java, Eastern Java, Northern Sumatra) 4 private commercial banks (BCA, NIAGA, DUTA, BUN) 1 private development bank (UPIINDO)	Firms with less than \$500,000 in operating assets and 20-150 full-time employees
(4) Second United Two Step Loan	Japan Export-Import Bank	300 (\$billion)	5 state-owned commercial banks BAPINDO 5 private commercial banks (BCA, NIAGA, DUTA, BUN, BCA) 2 private development banks	Open (non-petroleum gas exporters are preferred)
(5) Development Finance Loan	Asia Development Bank (ADB)	200	BAPINDO 5 private commercial banks (Danamaon, BDNI, BII, Bali, BCA) 2 private development banks	Open
Project For reference: AJDF	OECD	(Undecided)	Currently under negotiation	Primary agricultural products (coffee, cacao, tea, rubber, etc.) (assumed)

## (2) Possibility of Financial and Tax Incentives

It is well known that one of the reasons for Japan's high economic growth has been the high productivity and quality of its small and medium-sized businesses. Judging from firms in the subsectors targeted by the present survey, there was a large number of companies capable of being classified (in Japanese terms) as small businesses and medium-sized companies. Some of the financial and tax-related measures being implemented in Japan for the promotion of small business, therefore, might be of reference when considering policies for the promotion of Indonesian industrial sectors.

It was pointed out in the subsector reports, for example, that a large number of Indonesian firms will require facility renovation, in order to improve quality to levels suitable for export, together with investment to achieve safe, hygienic workplaces and prevent pollution. In Japan, the following types of financial and tax-related incentives have been provided to promote the modernization of facilities and the widespread introduction of safety, hygiene, and pollution prevention equipment:

a) Financial incentives (interest rates are as of June 1990, when the long-term prime rate was 7.9%)

### - Modernization loans

A program to provide loans for capital investment and operating funds in industry sectors for which modernization plans have been drawn up by the government

Interest rate:	7.55%	Maximum term:	15 years (capital investment) 5 years (operating funds)
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### - Labor-reduction loans

A program to provide loans for the purchase of labor-saving facilities by small businesses

Interest rate:	7.6%	Maximum term:	15 years
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### - Loans for the prevention of industrial pollution

A program to provide loans for the purchase of pollution-prevention facilities by small businesses

Interest rate:	6.7% (7.2% from the fourth year on)	Maximum term:	15 years
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### - Loans for the purchase of industrial safety and hygiene-related facilities

A program to provide loans for the purchase of safety and hygiene-related facilities by small businesses

Interest rate:	6.7% (7.2% from the fourth year on)	Maximum term:	15 years
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- Technology development loans

A program to provide loans for capital investment undertaken by small businesses in order to improve existing technologies

Interest rate: 7.6%

Maximum term: 15 years

These programs are managed by three financial institutions established by the government and specializing in small business finance. In addition, commercial banks sometimes serve as representatives for these institutions.

Above-mentioned institutional loan schemes are aimed for the issues of the small and medium-sized industries of Japan now facing. While the target of financial incentives to be introduced in Indonesia needs not necessarily be same as that of Japanese institutional loan schemes, problem areas pointed out in subsector reports such as pollution, quality control system, shortage of engineers could be the priority targets for the introduction of financial incentives.

b) Tax Incentives

- Accelerated depreciation of small business machinery and equipment

Companies with capital of less than ¥100 million and fewer than 1,000 employees are eligible for 14/100 special depreciation on the purchase of machinery costing at least ¥1.6 million per unit

- "Mechatronics" tax incentive

Small businesses purchasing so-called "mechatronics" equipment or computers are eligible for a 30% special deduction or a 7% tax credit

In Singapore, purchasers of computers, robots, and automated machine tools are allowed to deduct the entire value in the year of purchase.

Tax-related incentives are often used not only to promote improvements at local businesses but also to attract investment from abroad. The other ASEAN nations -- Singapore, Thailand, Malaysia, and the Philippines -- have established programs allowing reduction or exemption of withholding tax. In those sectors requiring the promotion of foreign investment, tax-related incentives for foreign corporations are also thought to be worthy of consideration.

<Major Incentives for Investment Promotion in Thailand>

1. Exemption of import tax and business tax in case of importing machines.
2. Exemption of import tax and business tax in case of importing raw materials or parts which are difficult to buy in Thailand.
3. Exemption of corporate tax: Tax Holiday (5 to 8 years)
4. Exemption of withholding tax on payment of royalty and technical consulting fee.
5. Payment of dividend can be counted as necessary expense, etc.



To enterprises located in the Investment Promotion Zone, there are some additional incentives such as,

1. 50% exemption of corporate tax after Tax Holiday
2. 90% exemption of Business Tax for 5 years
3. Expenses for transportation, electricity and water can be counted as necessary expense in double amount of actual cost.

<Tax Incentives for Investment in Singapore>

For the purpose of promotion of industrialization, job creation and export promotion, Singapore prepare several incentives for investment by "The Economic Incentives Act." In this act, there are several types of incentives such as,

- Pioneer Status  
Exemption of corporate tax for 5 to 10 years for Pioneer Status Industries such as, industries involving large capital expenditure and sophisticated technology.
- Export of Services Incentive  
90% exemption of corporate tax for approved service export.
- Approved Foreign Loan Scheme  
Interest on approved foreign loans exceeding S\$200 thousands to buy productive equipment from non-resident will be exempt from withholding tax.

(3) Enhancement of Technical Assistance

Very often, financial problems of the companies are caused by managerial factors, which could be solved only through improvement of management capabilities. It is needless to say that improvement of management capability must be done by the companies themselves. However, it is also indispensable to improve management capabilities at private companies through technical assistance including management guidance provided by the public institutions. Currently, technical assistance is carried out under Bank Indonesia, the central bank. Its performance is very good. But, due to budgetary and manpower constraint, technical assistance to improve management capability of small and medium sized companies as a whole is not yet sufficient.

a) Current Technical Assistance

Technical assistance currently being carried out under Indonesian government jurisdiction consists of the following two programs:

1) RPMUs (Regional Project Management Units)

RPMUs are organizations for technical assistance established by the SEDP (Small Enterprise Development Project). Three consultants (in finance, industry, and agriculture) are permanently stationed at each of Bank Indonesia's 13 branch offices to provide financial institutions and individual companies with guidance. KIK/KMKP and other liquidity credits established under the SEDP were abolished by PAKJAN, but the RPMUs are engaged in the same activities as at the time of the first-year survey.

## 2) TA Units

TA units, established by SMIEP, the successor project to SEDP, do not provide direct instruction for individual firms but rather certify consultants and offer evaluations and financial assistance for feasibility studies conducted by certified consultants. In addition, the TA units conduct primary evaluations of SMIEP two-step loans.

In the TA units, SMIEP consultants have also been permanently stationed at RPMUs in several locations outside of Jakarta.

### b) Technical Assistance: Problem Areas and Possible Solutions

The use of technical assistance to improve corporate management is critical to the development not only of the subsectors covered in the present survey but also of Indonesian industry as a whole. However, the number of companies which can be assisted by the 39 consultants permanently stationed at the 13 RPMUs is limited, and increases are needed in both the number of consultants and the number of RPMUs which serve as their base.

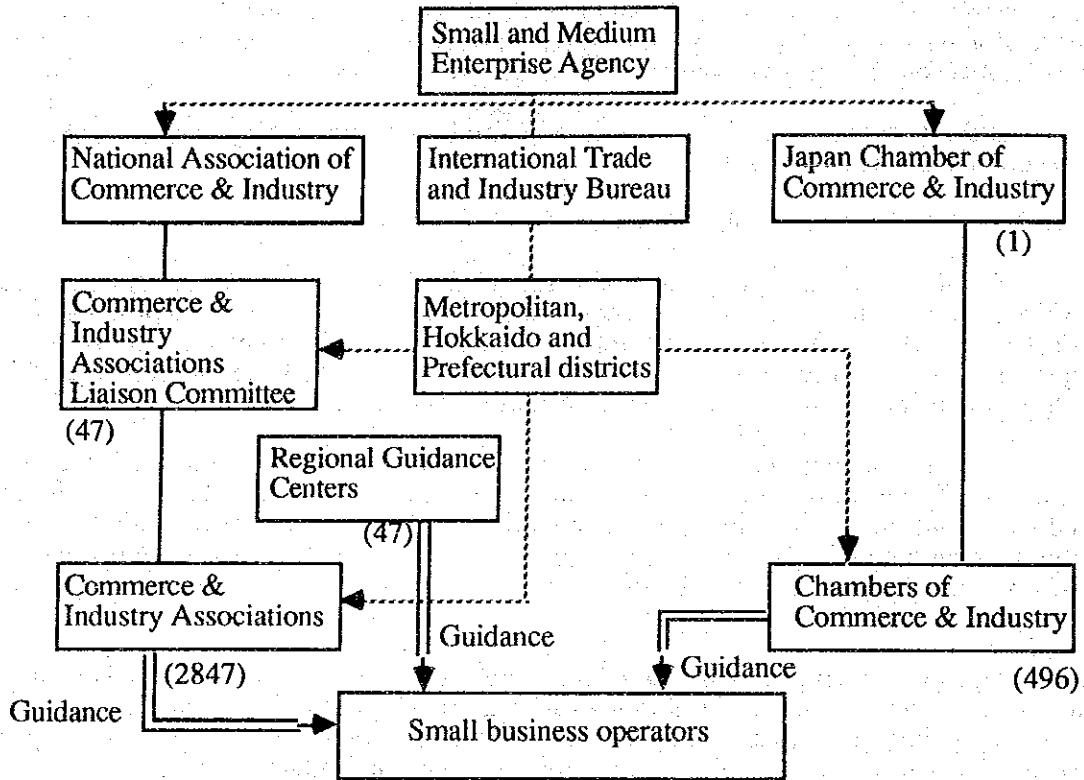
SMIEP is attempting to help a greater number of firms through the upgrading and promotion of consulting firms and the partial subsidization of consulting fees for feasibility studies conducted by TA units. Under this program, however, only firms conducting a certain amount of capital investment are eligible for assistance. Since the great majority of firms requiring guidance in the basics of management are not included in this group, the possibility of subsidizing fees for day-to-day instruction might be examined.

Japanese government has enacted many policies to develop small and medium-sized enterprises in these 40 years. One of the main policies is to establish management guidance system by public institutions. This policy has played a very important role in developing management capability of small and medium-sized companies in Japan.

Japanese case might be one suggestion for the enhancement of the management capabilities of small and medium-sized companies in Indonesia.

For the sake of reference, Fig. 1-3-1 shows the management guidance structure for small businesses in Japan. There are 8,557 management instructors belonging to chambers of commerce around the country, of which 4,030 are full-time instructors engaged in accounting-related guidance and 4,308 are part-time instructors. In addition, instructors are permanently stationed at chamber of commerce leagues and regional guidance centers in each prefecture. Thus the management guidance structure for small businesses in Japan is extremely well-equipped and supported by a large number of experienced instructors. The possibility of inviting some of these instructors from Japan for technical assistance might therefore be considered.

**Fig: 1-3-1 Management Guidance System for Japanese Small and Medium Enterprises**



Figures are shown in parentheses ( );  
 ..... indicates the flow of subsidies







JICA