4 PRESENT SITUATION OF THE MACHINE INDUSTRY IN INDONESIA

4.1 INDUSTRIAL DEVELOPMENT

Since the latter half of the 1970s, Indonesians government has pursued a policy of replacing imported basic materials with domestic substitutes and a policy of promoting the local production of automotive parts; it has also promoted the replacement of imported consumer goods made of metal with domestic products; and as a result, the country's machine industry has grown. To a large extent, this growth was facilitated by the import of capital goods and raw materials that was made possible by the enormous amounts of foreign currency obtained from petroleum exports.

Indonesia's industrialization has been marked by two special features: first, it has been furthered by foreign companies moving their manufacturing bases to Indonesia in what is known as the "Second Wave of Foreign Investment," which began in the latter half of the 1980s; and second, there have been structural changes in the country's industrial sector as a result of private domestic companies increasing their shares of the various industries.

The private domestic companies' share of the metal and general machine industries was 42-44% until 1990, when it shot up to 66-67%, far exceeding the shares of state-run companies and foreign companies. This sudden growth was due in part to the government's policy of promoting local production, but it was also due to the many private domestic companies that, following in the footsteps of foreign companies, entered those industries, introduced technology and, through imitation, increased their market shares.

This growth is reflected in the change in the structure of export revenue. Until 1982, the vast majority of that revenue came from petroleum and natural gas. Then, the revenue from industrial goods began increasing until, in 1991, it surpassed the revenue from petroleum and natural gas.

However, compared to the explosive growth in electronic machinery and transport

machinery that began in the mid 1970s, the growth in general machines has not been that great.

Among general machinery, pumps, except for special steel products and other special products, are produced locally and some are also exported.

In the area of machine tools, some small, general-purpose machines are locally produced, but in this area Indonesia relies almost completely on imports.

As Indonesia's textile industry has grown, its production of some kinds of textile machines has been started, but the majority of these machines are imported.

With regard to diesel engines, at present some of the cast and forged materials in the motors are imported, but small and medium-sized diesel engines are almost completely manufactured locally.

4.2 INDUSTRIAL STRUCTURE

According to the data issued by the MIOT, Indonesia's machine industry is made up of the following nine sub-industries.

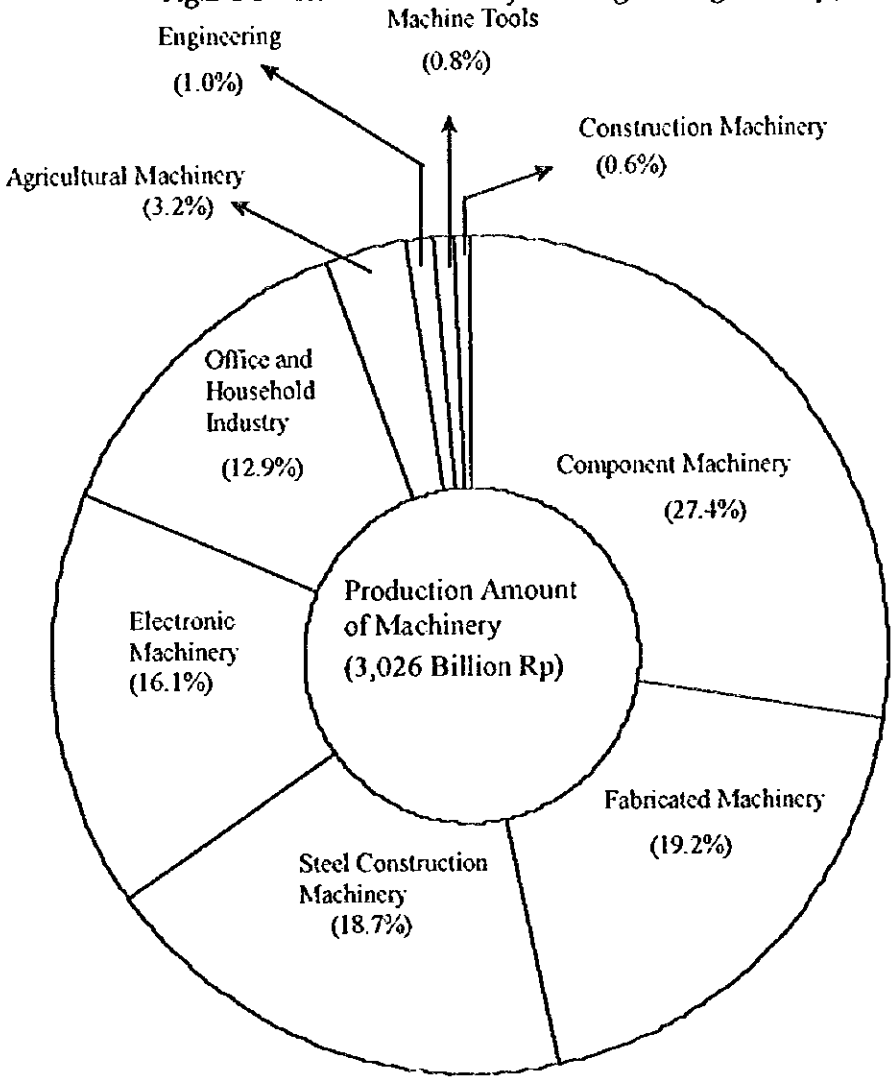
a. Machine tools industry
b. Agricultural machinery
c. Electronic machinery
d. Fabricated machinery
e. Construction machines
f. Steel construction industry
g. component industry
h. Office and household industry
i. Engineering industry

In 1994, the total value of the goods shipped in these nine fields was approximately Rp.276.6 billion (US$1,288 million), while in 1995 it increased to approximately Rp.302.6 billion (US$1,331 million).

The largest of the nine fields is the "component industry." In 1995 it accounted for 27.4% of the total value of shipments in the machine industry. The second largest field was "fabricated machinery," with 19.2%. Third was the "steel construction industry," with 18.7%. Next was "electronic machinery," with 16.1%. These four fields accounted for more than 80% of the industry's total shipment value.

Conversely, the smallest fields were "machine tools" (0.8%) and "construction machines" (0.6%). Each accounted for less than 1% of total shipment value (Refer to Fig. 2-4-1).

Fig.2-4-1 Share of Machinery and Engineering Industry(1995)



Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

Looking at investment trends in the machine industry over the past five years, it is observed that the average number of companies (foreign and domestic combined) that made (authorized) investments in the industry was approximately 80 per year. As of the end of 1995, there were 1,047 registered companies in the industry.

The ratio of domestic and foreign investments has varied from year to year, but generally the amounts from the two groups have been about equal (Refer to Table 2-4-1).

Table 2-4-1 Investment and Newly Established Companies

No.	Item	1991	1992	1993	1994	1995	Growth rate
1	New Companies	74	84	85	82	76	3.7%
2	Non Foreign / Domestic (million Rp)	102,652	72,100	111,562	512,192	616,998	128.0%
3	Domestic (million Rp)	85,836	68,407	212,573	288,650	107,103	75.4%
4	Foreign (thousand US$)	88,888	104,824	193,255	192,515	192,360	34.0%
	Total (million Rp)	319,375	357,702	729,960	993,357	1,161,337	50.7%

Note: Prepared by the Study Team.
Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

Looking at the regional allocation of the new investments, 75% have been concentrated in the capital region of Jakarta and in the province of West Java.

Table 2-4-2 Newly Established Companies by Region

No.	Region	1993	1994	1995
1	Jakarta	22	21	17
2	West Java	42	41	40
3	Central Java	3	1	1
4	East Java	7	12	9
5	North / South Sumatra		2	5
6	South Sulawesi			
7	Batam Island	7	3	4
8	East Kalimantan	2		
9	N T B	1		
10	Central Java	1	2	
Total		85	82	76

Note: Prepared by the Study Team.
Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

As a result of these investments, the number of new jobs created each year has grown to more than 10,000 (Refer to Table 2-4-3).

Table 2-4-3 Newly Established Companies and Newly Generated Employment

No.	Region	1991	1992	1993	1994	1995	Growth rate
1	New Companies	74	65	85	82	76	1.9%
2	All Companies	739	804	889	971	1,047	9.1%
3	Jobs Created	7,593	6,744	8,263	10,710	10,898	10.7%

Note: Prepared by the Study Team.
Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

By the study target item, (i) irrigation pipes belong to the "agricultural machinery" sub-industry; (ii) machine tools belong to "machine tools"; (iii) textile machines belong to "fabricated machinery"; and (iv) diesel engines also belong to "fabricated machinery." However, the parts and components of these items all belong to the "component industry."

4.3 TREND OF DOMESTIC PRODUCTION

Over the past three years (1993-1995), the value of the entire machinery industry's shipments has grown by an average of 8.3% per year. However, there were two sub-industries whose growth rate exceeded this average: the "steel construction industry" (12.6%) and the "component industry" (12.5%). The "component industry" accounts for roughly 33% of the machinery industry's shipment value and has a high growth rate.

The main items produced in the "steel construction industry" are the steel materials used in constructing buildings, bridges and other engineering structures. Moreover, the "component industry" manufactures the various kinds of parts and components that are used in general industrial machines.

Looking at the growth in added value in the machinery industry over the same years (1993-1995), it has increased by an average of 8.4% per year. However, here, as with shipment value, "construction machines" and the "component industry" exceeded the average: their growth rates for added value were 17.1% and 17.0%, respectively - each more than double the industry average. (Refer to Table 2-4-4)

The sub-industries whose shipment value grew at a rate below the industry average included the "fabricated machinery" industry, which manufactures boilers, diesel engines, coconut breakers, leaf cutters, etc.; the "agricultural machinery" industry, which manufactures tractors, rice-cleaning machines, irrigation pumps, etc.; the "electronic machinery" industry, which manufactures generators, transformers, panels, motors, etc.; the "machine tools" industry, which manufactures lathes, drills and other kinds of machine tools; and "construction machines," which include cranes, asphalt paves, asphalt mixing plants, stone crushers, etc.

Table 2-4-4 Production Amount and Value Added

(Unit : Billion Rp.)

No.	Item	1993	1994	1995	Growth rate	Share
1	Fabricated Machinery					
	a. Amount	521.5	553.7	581.4	5.6%	19.2%
	b. Value Added	161.6	171.7	180.2	5.6%	28.7%
2	Agricultural Machinery					
	a. Amount	83.4	92.3	95.9	7.3%	3.2%
	b. Value Added	35.0	38.8	40.3	7.3%	6.4%
3	Electronic Machinery					
	a. Amount	444.2	463.7	486.9	4.7%	16.1%
	b. Value Added	146.9	155.3	163.1	5.4%	25.9%
4	Machine Tools Industry					
	a Amount	21.1	24.8	25.3	9.7%	0.8%
	b. Value Added	6.6	7.7	7.8	9.2%	1.2%
5	Steel Construction Industry					
	a. Amount	426.2	492.2	566.0	15.2%	18.7%
	b. Value Added	46.9	54.1	67.9	20.4%	10.8%
6	Construction Industry					
	a. Amount	16.2	18.3	19.1	8.8%	0.6%
	b. Value Added	1.8	2.0	2.1	8.1%	0.3%
7	Component Industry					
	a. Amount	627.1	721.2	829.4	15.0%	27.4%
	b. Value Added	69.0	79.3	99.5	20.2%	15.8%
8	Office and Household Industry					
	a. Amount	365.1	372.2	390.8	3.5%	12.9%
	b. Value Added	40.1	40.9	43.0	3.6%	6.8%
9	Engineering Industry					
	a. Amount	26.4	28.0	30.8	7.9%	1.0%
	b. Value Added	20.1	21.0	24.6	10.8%	3.9%
	Total a. Amount	2,531.2	2,766.4	3,025.6	9.3%	
	b. Value Added	528.0	570.8	628.6	9.1%	

Note: Prepared by the Study Team.

Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

4.4 TREND OF EXPORT AND IMPORT

4.4.1 Imports

In the machinery industry, the sub-industry whose imports have the largest value is "fabricated machinery"; its imports account for 52.7% of the industry's total import value. However, this sub-industry's imports are increasing at an average annual rate of only 2.2% - less than the 4.0% average in the machinery industry as a whole. The sub-industry with the second largest import value is the "component industry"; its imports account for 21.6% of the total. Moreover, its imports are growing at a high average annual rate of 12.5%. Third is "electronic machinery," with an 11.7% share. However, its imports are on a declining trend. These three sub-industries account for 86%, or almost all, of the value of machinery industry imports.

There are three sub-industries whose imports are declining. In addition to "electronic machinery," they include the "steel construction industry" and the "engineering industry."

Table 2-4-5 Import of Machinery & Engineering Industry

(Unit : US$ Million)

No.	Item	1992	1993	1994	1995	Growth rate	Share
1	Fabricated Machinery	4,135.5	4,054.7	4,063.9	4,209	0.6%	52.7%
2	Agricultural Machinery	48.1	35.8	23.1	40.5	4.8%	0.5%
3	Electronic Machinery	1,293.6	922.8	877.8	931.1	-9.2%	11.7%
4	Machine Tools Industry	368.8	349.2	486	511	13.0%	6.4%
5	Steel Construction Machinery	271.4	188.5	178.5	179.4	-11.8%	2.2%
6	Construction Machine	349.1	321.5	273.9	346.1	1.2%	4.3%
7	Component Industry	1,188	1,619.8	1,496.6	1,720.5	14.6%	21.6%
8	Office and Household Industry	15.9	11.7	11.4	19.6	14.3%	0.2%
9	Engineering Industry	25.1	22.5	34.6	26.4	6.6%	0.3%
	Total	7,695.5	7,526.5	7,445.8	7,983.6	1.3%	

Note: Prepared by the Study Team.
Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

4.4.2 Exports

The value of the entire machinery industry's exports is less than 10% of the value of its imports; the machinery industry could thus be described as an industry that is highly reliant on imports. However, its exports have been rapidly increasing: by an average rate of approximately 30% per year (Refer to Table 2-4-6). The exports of every sub-industry except "machine tools" have been increasing. The rate of increase has been particularly high for "construction machines" and "agricultural machinery." Moreover, the sub-industries with the largest export values are the "office and household industry," "fabricated machinery" and the "component industry."

Table 2-4-6 Machinery and Engineering Industry Export

(Unit : US$ Million)

No.	Item	1992	1993	1994	1995	Growth rate	Share
1	Fabricated Machinery	18.5	96.1	113.5	135.8	152.4%	22.3%
2	Agricultural Machinery	0.5	0.2	1.1	1.7	148.2%	0.3%
3	Electronic Machinery	64.7	46.8	50.9	79.9	12.7%	13.1%
4	Machine Tools Industry	2.1	3.6	0.8	0.6	-10.4%	0.0%
5	Steel Construction Machinery	8.9	15.4	19.1	19.2	32.5%	3.2%
6	Construction Machinery	1.7	26.4	3.4	81.7	1,222.9%	13.4%
7	Component Industry	65.1	30.2	93.6	106.3	56.6%	17.5%
8	Office and Household Industry	84.9	145.6	176.9	176.9	31.0%	29.1%
9	Engineering Industry	3.9	4.5	5.5	5.6	13.1%	0.9%
	Total	250.3	368.8	464.8	607.7	34.7%	

Note: Prepared by the Study Team.

Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

4.5 THE CURRENT SITUATION FOR EACH SURVEY TARGET ITEM

4.5.1 Pumps

(1) Main Manufacturers

Approximately 200 companies belong to GAMMA (the Federation of Indonesian Metalworks and Machinery Industries). Of these 200 companies, 22 belong to ALSINTANI (Association of Indonesia Agricultural Machinery) and seven belong to AIPSI (Association of Indonesian Pumps Industry); and of these 29 companies, 10 are the main manufacturers of pumps.

Table 2-4-7 Main Pump Manufacturing Companies

Enterprises	Place	Item of Production	Remarks
① PT. AGRINDO	Surabaya	- Water Pumps - Turbine Pumps	
② PT. EBARA INDONESIA	Jakarta Bogor Cimanggis	- Self Priming Pumps - Centrifugal and Suction Volute Pumps - Submersible Pumps - Horizontal Split Casing Pumps - Mixed Flow Pumps - Turbine Pumps	J/V with Foreign Company
③ CV. KARYA HIDUP SENTOSA	Yogyakarta	- Pumps	
④ CV. KEMAJUAN	Melang	- Pumps	
⑤ CV. PABRIK MESIN "GUNTUR"	Surabaya	- Irrigation & Industrial Pumps - Centrifugal Pumps - Self Priming Pumps - Axial Flour Pumps - Mixed Flour Pumps	
⑥ CV. SURATMAN	Surakarta	- Axial & Centrifugal Pumps	
⑦ PT. BUMI CAHAYA UNGGUL	Jakarta	- Centrifugal Pumps - Screen Pumps	
⑧ PT. GUNA ELEKTRO	Jakarta	- Pumps	
⑨ PT. OYAMA LTD.	Jakarta	- Centrifugal Pumps - Gear Pumps	
⑩ PT. TORISHIMA GUNA INDONESIA	Jakarta	- Centrifugal Pumps - Test Pumps	J/V with Foreign Company

Source: GAMMA

(2) Trends in Local Production

Irrigation pumps are considered part of "agricultural machinery." This sub-industry

constitutes only a small part of the machine industry, and its growth rate is also below the industry average. In 1995, however, 76,800 irrigation pumps were produced, and their shipment value, Rp.3.29 billion, corresponded to approximately one third of this sub-industry's total shipment value, Rp.9.59 billion.

According to the "Annual Survey of Large and Medium Manufacturing Establishments for 1993," 983 general-purpose pumps, with a shipment value of Rp.98 million, were produced in 1993. Moreover, the shipment value of the spare parts produced that year was Rp.580 million.

Table 2-4-8 Production of Agricultural Machinery

No.	Item	1993	1994	1995	Growth rate	Share
1	Irrigation pumps					
	a. Volume (unit)	66,857	71,939	76,800	7.2%	
	b. Value (Rp. Million)	28,501	32,915	34,561	10.2%	52.7%
2	Tractors					
	a. Volume (unit)	9,386	10,016	10,189	4.2%	
	b. Value (Rp. Million)	20,975	24,219	24,455	8.2%	37.3%
3	Rice Milling					
	a. Volume (unit)	1,560	1,662	1,745	5.8%	
	b. Value (Rp. Million)	1,875	2,161	2,269	10.1%	3.5%
4	Threshers					
	a. Volume (unit)	1,186	1,364	1,458	10.9%	
	b. Value (Rp. Million)	1,689	1,943	2,041	10.0%	3.1%
5	Hullers					
	a. Volume (unit)	1,511	1,609	1,697	6.0%	
	b. Value (Rp. Million)	1,039	1,197	1,256	10.1%	1.9%
6	Polishers					
	a. Volume (unit)	1,155	1,233	1,296	5.9%	
	b. Value (Rp. Million)	833	963	1,011	10.3%	1.5%
	Total Value	54,912	63,398	65,593	9.5%	

Note: Prepared by the Study Team.
Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

(3) Trends in Imports and Exports

The value of pump imports has varied from year to year. In general, however, it has been in the range of US$130-200 million in each of the past several years. "General-purpose pumps" have accounted for the majority of this amount. In 1993, the value of their imports doubled from the year before. In 1994, the value of imported "manually operated pumps" also increased sharply. On the other hand, the value of imported "components and parts" has been on a slightly decreasing trend, although it still comprises a large 30-50% share of the value of all pump-related imports.

The import reliance rate (which is measured in monetary terms: import value/(domestic shipment value + import value - export value)) of the pump industry in 1994 was 92.9%. This was a decrease of one point from the first half of the year, but the industry is still one that is highly dependent on imports.

Table 2-4-9 Import of Pumps

(Unit: US$ Million)

No.	Kinds of Tools	1990	1991	1992	1993	1994	Growth rate
1	Pumps for dispensing fuel	2.6	2.4	2.6	2 2	2.9	4.2%
2	Fuel lubricating or cooling pumps	4.9	3.3		3.3	4.4	-32 5%
3	Concrete pumps	2.4	2.4	4.1	0.6	2.4	74.1%
4	Other pumps designed to measuring and reciprocating device	4.8	2.7	3.2	2.5	4.7	10.4%
5	Other rotary reciprocating positive displacement pumps	3.5	6.2	6.2	8.2	7.5	25.2%
6	Other pumps	55.4	32.8	49.8	108.1	102.5	30.7%
7	Liquid elevators	0.7	1.7	2.7	4.9	19.2	143.9%
8	Components and parts	53.3	148.0	72.8	66.7	56.5	25.8%
Total		127.5	199.6	141.4	196.4	200.1	17.0%

Note: Data given by Directorate for Machinery and Engineering Industry, MOIT

4.5.2 Machine Tools

(1) Main Manufacturers

Thirteen companies are affiliated with ASIMPI (Association of Indonesia Machine Tools).

Table 2-4-10 Main Machine Tools Manufacturing Industries

Enterprises	Place	Items Produced	Remarks
① PT. BINTANG MAS INDUSTRI	Tegal	- Lathe Machines - Hydraulic Machines	
② PT. CIPTA KARYA	Surabaya	- Drilling Machines - Power Hack Saws	
③ PT. FIRST MACHINERY TRADE CO.	Bandung	- CNC Machine Tools - Metalworking Machines - Mold Die Machines	
④ PT. INDUSTRI MESIN PERKAKAS INDONESIA (Persero)	Cilegon	- Precision Lathe Machines - Components, Jigs & Fixtures	
⑤ PT. KARYA PRIMA	Yogyakarta	- Power Hack Saws - Bench Drills & Machine Tools	
⑥ PT. MEDAN GERAK JAYA	Bekasi	- Hydraulic Presses - Bench Drills - Guillotine Machines - Milling Machines	
⑦ PT. PIMSF	Jakarta	- Machine Tools - Precision Gears	
⑧ PT. PINDAD	Bundung	- Hydraulic Presses - Bench Drills - Guillotine Machines - Milling Machines	State-owned Company
⑨ PT. SARANA IDEA UTAMA	Jakarta	- Shearing Machines - Guillotine Machines - Rolling Machines - Bending Machines - Hydraulic Presses	
⑩ CV. SUMBER BAHAGIA	Bogor	- Drilling Machines - Machine Pumps - Hydraulic Presses	
⑪ PT. TJOKRO GROUP	Jakarta	- Machine Tools - Precision Gears	
⑫ PT. TOOLS INDONESIA	Jakarta	- Lathe Machines - Milling Machines - Grinding Machines	

Note: Prepared by the Study Team.
Source: *Company Profile of GAMMA Members, 1994/95*

These companies are believed to manufacture eight types of machine tools in Indonesia. The production capacity of their facilities is 16,300 units/year. Of these facilities, those used for manufacturing boring machines are estimated to have the largest capacity: 5,900 units/year. Second are the facilities for manufacturing presses: 3,000 units/year. Next are the facilities for manufacturing milling machines: 2,000 units/year. The facilities for manufacturing the other types of machine tools of lathes, grinders, sawing machines, rolling machines, and shearing machines are assumed to be of extremely limited capacity.

Previously, two companies led this field: PT. Toolsindo and PT. PIMSF. PT. Toolsindo owned approximately 20% of the production capacity of domestic facilities (2,600 units); it was also the first company in Indonesia to assemble lathes. PT. PIMSF possessed approximately 40% of domestic production capacity (6,000 units). Tjokoro was also known as one of the leaders in the field, and as a workshop and a repairer of machine tools as well.

However, according to information from GAMMA and ASIMPI, although various manufacturers, as described above, do indeed exist, only about two of them, IMPI and PINDAD, have factories that are actually operating at present. The others have production facilities, but are said to have stopped from production activities because of an inability to compete with imports from China, Taiwan and elsewhere.

The breakdown of the machine tools that PINDAD produced in 1994 was as follows.

a. Lathes	149 units
b. Milling machines	70 units
c. Surface processors	6 units
d. Cylindrical grinding machines	3 units
e. Shaping machines	6 units

(2) Domestic Production Trends

Machine tools account for only 0.8% of the machinery industry, and the quantitative trends in their production do not compare favorably with the quantitative production trends in the other sub-industries. As shown in Table 2-4-11, the production output of machine tools is low, although many different types of machine tools are being manufactured. Of these, the ones with the greatest volume and value are dies, molds, jigs, and tools; they account for approximately 60% of all the machine tools produced in Indonesia. Next, accounting for approximately 30%, are grinding machines.

Based on shipment value, most of the spare parts produced in Indonesia are related to

lathes.

Table 2-4-11 Machine Tool Production

No.	Item	1993	1994	1995	Growth rate	Share
1	Lathes					
	a. Volume (unit)	121	132	135	5.7%	
	b. Value (Rp. Million)	1,441	1,583	1,614	5.9%	6.4%
2	Boring Machinery					
	a. Volume (unit)	125	167	172	18.3%	
	b. Value (Rp. Million)	59	63	64	4.2%	0.3%
3	Milling Machinery					
	a. Volume (unit)	26	43	45	35.0%	
	b. Value (Rp. Million)	347	608	620	38.6%	2.5%
4	Grinding Machinery					
	a. Volume (unit)	75	89	92	11.0%	
	b. Value (Rp. Million)	239	288	294	11.3%	1.2%
5	Cutting Machinery					
	a. Volume (unit)	74	98	100	17.2%	
	b. Value (Rp. Million)	210	317	323	26.4%	1.3%
6	Cutting Machinery					
	a. Volume (unit)	100	111	113	6.4%	
	b. Value (Rp. Million	97	107	109	6.1%	0.4%
7	Bending Machinery					
	a. Volume (unit)	243	252	257	2.8%	
	b. Value (Rp. Million)	530	549	559	2.7%	2.2%
8	Rolling Machinery					
	a. Volume (unit)	99	117	119	9.9%	
	b. Value (Rp. Million)	312	368	375	9.9%	1.5%
9	Other machine Tools					
	a. Volume (unit)	1,196	3,690	3,772	105.4%	
	b. Value (Rp. Million)	11,541	14,427	14,715	13.5%	58.2%
10	Polishing mechinery					
	a. Volume (unit)	6,021	5,982	6,108	0.7%	
	b. Value (Rp. Million)	6,339	6,468	6,597	2.0%	26.1%
	Total Value	21,115	24,778	25,270	9.7%	

Note: Prepared by the Study Team.
Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

(3)Trends in Imports and Exports

Imports of machine tools decreased slightly in 1993, but overall they have been on an

increasing trend. As can clearly be seen from the fact that, in 1994, the value of exports was US$11.5 million while the value of imports was US$538 million, this is a sub-industry that is almost completely dependent on imports. Its import reliance rate is thus high: in 1994 it was 98.1%. However, the value of cutting tool imports is low compared to the value of the imports of each of the other kinds of machine tools.

On the other hand, the value of imported components and parts accounts for 10-15% of the value of all machine tool imports a comparatively large share.

Table 2-4-12 Import of Machine Tools

(Unit : US$ Million)

No.	Kinds of Tools	1990	1991	1992	1993	1994	Growth rate
1	Cutting Tools	25.0	27.0	20.5	23.4	21.4	-2.6%
	- Tools for tapping or threading	1.1	0.7	1.2	1.3	1.7	17.7%
	- Tools for drilling, other than for rock drilling	2.3	2.3	1.8	1.9	3.1	11.1%
	- Tools for boring or broaching	3.7	0.8	0.8	0.6	0.4	-34.0%
	- Tools for milling	0.9	1.1	0.6	0.8	0.5	-5.8%
	- Tools for turning	0.5	1.1	0.9	2.2	0.7	43.2%
	- Other interchangeable tools	7.9	8.5	5.0	5.1	4.4	-11.2%
	- Knives and cutting blades for metal working	0.7	0.7	0.7	1.2	0.7	9.6%
	- Knives and cutting blades for wood working	8.0	11.8	9.5	10.3	10.0	8.2%
2	Machine Tools	522.0	487.9	419.9	349.1	538.3	4.2%
	- Lathes	35.2	36.9	20.4	52.8	35.7	21.5%
	- Boring machines	20.8	17.9	13.2	6.9	29.1	58.8%
	- Milling machines	11.6	12.0	21.1	23.9	16.5	15.3%
	- Other Machine Tools	454.4	344.9	314.2	211.0	404.7	6.5%
	- Components / parts		76.2	51.1	54.7	52.3	-10.1%

Note: Data given by Directorate for Machinery and Engineering Industry, MOIT

The countries from which Indonesia imports machine tools include Japan, South Korea, Taiwan, China, Singapore, Australia, the USA, Great Britain, Germany, Belgium, Italy, Spain, the Philippines, Malaysia, France, Denmark, Poland, etc. Moreover, most of the

machine tools that are imported are used products.

4.5.3 Textile Machines

(1) Main Manufacturers

According to "Plant Machinery Industries, 1992," Indonesia had one manufacturer of textile machines and four manufacturers of sewing machines in 1992. These four companies made sweater knitting machines. Due to, among other things, foreign investment from South Korea and other countries, there are now, it is estimated, eight major manufacturers of textile machines in Indonesia.

Based on their factories' production equipment, these companies are estimated to have the following production capacities.

a. Weaving machines 1,200 units
b. Twisting machines 1,200 units
c. Winding machines 1,200 units
d. Wrapping machines 600 units
e. Rapier shuttle looms 2,400 units

Table 2-4-13 Main Textile Machinery Manufacturing Companies

Enterprises	Place	Item of Production	Remarks
① PT. TEXMACO PERKASA ENGINEERING	Kendal	- Bobbin Machines - Weaving Machines	
② PT. AROUND STAR	Bandung	- Sweater Knitting Machines	
③ PT. ALAM RAYA	Jakarta	- Sewing Machines	
④ PT. SINGER INDUSTRIES INDONESIA	Sidoarjo	- Sewing Machines	
⑤ PT. MADONA SEWING MACHINE	Jakarta	- Sewing Machines	
⑥ PT. OTTO TEHNIK	Bandung	- Rapier Shuttle Loom Machines	
⑦ PT. CHEONGSONG INDONESIA	Bandung	- Twisting Machines - Winding Machines - Finishing Machines	J/V with Forejgn Company
⑧ PT. KART MACHINE INDUSTRIES	Bekasi	- Circular Knitting	

Source: GAMMA

(2)Trends in Local Production

Due to the declining competitiveness of their textile industries, Japan, Taiwan, South Korea and other industrialized countries have been transferring their textile production facilities to developing countries, including Indonesia. As a result, Indonesia's spinning equipment has also rapidly increased.

Table2-4-14 Trend of Spinning Machinery

Item	1991	1992	1993
Spinning Machinery (10,000 Spindle)	460	550	630
Spinning Value (10,000 Tons)	618	715	794

Source: *Indonesia Handbook, 1994*, Jakarta Japan Club

Table2-4-15 Trend of Long Fiber Spinning Machinery

(Unit: Sets)

Item	1991	1992	1993
Water Jet Looms	3,900	5,400	6,400
Rapiers	2,650	2,700	3,200
Common & Textile Machines	16,500	19,500	20,500
Total	23,050	27,600	30,100

Source: Same as Table2-14

On the other hand, no companies that manufacture textile machines are to be found among the members of GAMMA. For statistical purposes, these machines are included in the category of "assembly machines," but they are not among the top products produced in this category.

PT. Cheongsong Indonesia, a joint venture with a South Korean company, was established in 1993. Before that, Indonesia's textile machine industry consisted mainly of PT. Texmaco Perkasa Engineering (of the Texmaco Group) and manufacturers of home sewing machines.

According to the "Annual Survey of Large and Medium Manufacturing Establishments,"

371 weaving machines were produced in Indonesia in 1993. Their shipment value was approximately Rp.31.9 billion, while the shipment value of spare parts for such machines was more than half that amount, Rp.17.1 billion. The shipment value of weaving machines and their spare parts thus accounted for more than 80% of the total shipment value of the textile machines produced in Indonesia (Rp.59.8 billion). The production of textile machines in Indonesia has been increasing by 280-350 units a year. The number of sewing machines produced is now 12,500; their shipment value is ¥410 million.

The number of sewing machines produced in 1987 was 148,580, but that number subsequently decreased sharply due to competition from imports. However, the market is growing again; in 1995 it recovered to the 59,500 unit level.

(3)Trends in Imports and Exports

Twisting machines, spinning machines, winders, weaving machines, power looms, circular knitting machines, etc., are among the textile machines imported into Indonesia. However, these imports reached their peak in 1991; since then they have been decreasing sharply.

Among imported textile machines, weaving machines and spinning machines are the ones with the highest import value. In 1994 these two types of machines accounted for more than 50% of the value of all textile machinery imports. In 1993 the import reliance rate for textile machines was 95.8%.

Parts and accessories account for 10-15% of the total value of each year's textile machinery imports.

Table 2-4-16 Import of Textile Machinery

(Unit: US$ Million)

No.	Kinds of Machinery	1990	1991	1992	1993	1994	Growth rate
1	Machines for extruding, Drawing on cutting machines	39.6	239.7	107.2	108.6	62.3	102.0%
2	Carding machines	49.5	54.6	25.0	22.8	18.1	-18.4%
3	Combing machines	16.7	25.8	7.0	6.4	6.3	-7.1%
4	Drawing for roving machines	32.1	51.8	18.7	18.6	15.1	-5.5%
5	Textile spinning machines	212 5	195.5	81.3	58.3	147.4	14.5%
6	Textile winding or reeling machines	67.4	99.8	55.8	45.8	49.2	-1.7%
7	Machines for weaving fabrics	187.3	273.4	94.8	201.5	151.7	17.1%
8	Power looms	30.2	25.5	13.5	8.0	12.5	-11.7%
9	Circular knitting machines	38.3	24.6	13.1	28.2	34.7	13.9%
10	Other embroidery machines	28.3	23.6	27.9	15.4	3.4	-30.2%
11	Other auxiliary machines	179.2	236.4	25.2	30.6	8.5	-27.1%
12	Bobbin & jacquard machines	11.8	8.1	5.6	11.2	9.9	6.6%
13	Parts and accessories	77.8	113.5	84.6	90.7	48.6	-4.7%
	Total	970.5	1372.0	559.6	646.0	567.6	-3.6%

Note: Data given by Directorate for Machinery and Engineering Industry, MOIT

4.5.4 Diesel Engines

(1) Main Manufacturers

Thirteen manufacturers of diesel engines belong to ABI (Association of Indonesian Internal Combustion Engine Manufacturers).

Table 2-4-17 Major Diesel Engine Manufacturing Companies

Enterprises	Place	Item of Production	Remarks
① PT. ADI PERKASA BUANA	Jakarta	- Diesel Engines - Generator Sets	
② PT. BOMA BISMA INDRA	Surabaya	- Diesel Engines - Generator Sets - Diesel Marines - Diesel Automotive Engines	State-owned Company
③ PT. KUBOTA INDONESIA.	Semarang	- Diesel Engine Components	J/V with Foreign Company
④ PT. NATR RAYA	Bogor	- Diesel Engines - Marine Engines - Gas Engines - Generator Sets	J/V with Foreign Company
⑤ PT. NISDEMI	Jakarta	- Diesel Engines - Generator Sets	J/V with Foreign Company
⑥ PT. PAL INDONESIA	Surabaya	- Diesel Engines - Heat Exchangers	State-owned Company
⑦ PT. TRI RATNA DIESEL INDONESIA	Surabaya	- Single Cylinder Multi Purpose Diesel Engines	
⑧ PT. WIRA MUSTIKA INDAH	Jakarta	- Diesel Engines	
⑨ PT. YANMAR DIESEL INDONESIA	Bogor	- Stationary Diesel Engines - Marine Diesel Engines - Electric Generators	J/V with Foreign Company

Source: GAMMA

(2)Trends in Local Production

In Indonesia, engines are categorized according to their power.

a. Small engines: 4-30 Hp
b. Mid-size engines: 31-500 Hp
c. Large engines: More than 500 Hp
d. Diesel engines are mainly used for ships and electric power generators. According to the "Annual Survey of Large and Medium Manufacturing Establishments," the shipment value of diesel engines in 1993 was Rp.182.4 billion. This was approximately 60% of the shipment value of all internal combustion engines (Rp.310.4 billion).

Production trends for diesel engines are shown in Table 2-4-19. The annual output of small diesel engines is now around 70,000 units, while that of large and mid-size engines recently topped the 2,000 unit level.

Table 2-4-18 Production of Diesel Engines

(Unit: Sets)

	1991	1992	1993	1994	1995
Small Engines	79,354	71,000	71,000	59,416	62,386
Medium & Large Engines	800	500	1,750	2,000	2,112

Source: DMEI, MOIT

(3)Trends in Imports and Exports

In the past five years, diesel engine imports have shown a sharply declining trend. In 1994, their value was US$48.8 million. The main imports were small marine engines of 750 KW or less, vehicle engines, etc. However, the majority were CKD basis engines.

In 1993, Indonesia's import reliance rate for diesel engines was 39.1%. Of study target items, diesel engines are those whose production has been localized to the greatest extent.

Table 2-4-19 Import of Diesel Engines

(Unit: US$ Million)

No.	Kinds of Engine	1990	1991	1992	1993	1994	Growth rate
1	Marine propulsion engines < 750kw	6.4	9.7	10.5	3.4	6.3	19.2%
2	Other marine prop. engine s< 750kw	1.9	5.0	12.8		5.6	72.8%
3	Engines used for vehicles	1.1	2.4	66.8		0.2	899.9%
4	Other engines	23.8	22.3	25.3	29.7	6.4	-13.5%
5	Other CKD engines	142.0	120.0	16.4	22.8	30.4	-7.4%
Total		175.2	159.4	131.7	55.9	48.8	-24.2%

Note: Data given by Directorate for Machinery and Engineering Industry, MOIT

4.6 FUTURE DEVELOPMENT OUTLOOK

4.6.1 Barometers of Growth

Barometers of growth in the general machinery industry in 1994-1998 were established as follows (Refer to Table 2-4-20).

(1) Value of Domestic Shipments

The value of domestic shipments will increase from Rp.2.8 billion in 1994 to approximately 2.6 times that amount, Rp,7.2 billion in 1998.

(2) Investment

Investment will increase from Rp,1.0 billion in 1994 to approximately 2.4 times that amount, Rp,2.4 billion, in 1998.

(3) Imports

The figures for imports were set somewhat low: imports will increase from Rp.25.0 billion in 1994 to approximately twice that amount, Rp.52.0 billion, in 1998.

(4) Exports

The figures for exports were set somewhat high: exports will increase from US$400 million in 1994 to US$1.3 billion in 1998.

(5) Employment

It is estimated that the number of new hires that will be added each year due to the expansion of this industry is 15,000 people.

Table 2-4-20 Macro Projections for the Machinery Industry

No.	Item	1994	1995	1996	1997	1998	Growth rate
1	Import (Rp. Billion)	25.0	30.0	36.0	43.0	52.0	20.1%
2	Production (Rp. Billion)	2.8	4.2	5.0	6.0	7.2	27.3%
3	Investment (Rp. Billion)	1.0	1.4	1.7	2.0	2.4	25.0%
4	Export (US$. Million)	400	600	720	864	1,300	35.1%
5	Newly Generated Employment	10,710	15,000	15,000	15,000	15,000	10.0%

Note: Prepared by the Study Team.
Source: *Laporan Kegiatan Tahun 1994-1995*, MOIT

4.6.2 Competitiveness of Domestically Produced Products

According to the data from the Ministry of Industry and Trade (MOIT), products are divided into three groups: (1) domestically produced products that already have competitiveness; (2) products that can be expected to be competitive in the future; and (3) products for which technical capabilities are currently inadequate and whose competitiveness will have to be increased.

The survey target items of pumps, machine tools, textile machines, and diesel engines also fit into these groups as follows.

(1) Products That Already Have Competitiveness

Nine items - loading/unloading machines, freezers, industrial boilers, etc. - are included in this group. Also included are pumps.

(2) Products That Can be Expected to be Competitive in the Future

This group includes 16 items: circuit breakers, industrial bulbs, food processing machines, etc. Also included are: (i) simple machine tools (for metal processing); and (ii) spare parts for textile machines.

(3) Products Whose Competitiveness Will Have to be Increased

This group includes 13 items: cooling towers, rubber manufacturing machines, wood processing machines, etc. Also included are: (i) textile machines (weaving, sewing); (ii) implements (molds, dies, jigs, tools); (iii) small diesel engines; (iv) castings and forgings; and (v) simple machine tools (for metal cutting).

4.6.3 Overall View

(1) Pumps

There are various types of pumps: centrifugal pumps, reciprocating pumps, vacuum pumps, general-purpose pumps, etc. Of the various types, the one most produced in Indonesia is the general-purpose pumps.
However, Indonesia's production of pumps is still mostly CKD based. Accordingly, its import reliance rate is as high as 94%. Pumps are products for the development of which Indonesia should introduce casting, forging and other production technologies.

(2) Machine Tools

Machine tools are the so called mother machines used for manufacturing other machines. As a result, the machine tool industry is highly dependent on trends in the machinery industry as a whole. Because the Indonesia's machinery industry is expanding, the need for machine tools is great. The question is whether products that can compete with imports can be produced domestically.

(3) Textile Machines

Indonesia surpassed Thailand in the production of spinning machine spindles and weaving machines in 1980 and in the value of textile exports in 1992, when its textile industry became the biggest in the Southeast Asia. Thus, the textile industry is positioned as a

key industry, from all aspects of the amount of added value, the number of employees, or the export value.

On the other hand, although the TEXMACO Group and others produce air jet looms and some of these are exported; for textile machines, Indonesia has an import reliance rate of 96%. As this indicates, Indonesia depends almost totally on imports for its textile production equipment. Accordingly, in Indonesia, there is a pressing need both for the import substitution for textile machines and equipment and for parts and components used for maintenance of facilities built in the '60s and '70s.

(4) Diesel Engines

Among survey target items, diesel engines are those for which the replacement of imports with domestic products has progressed the farthest. In addition, major foreign companies in this industry have entered Indonesia, resulting in a production system that can meet the needs of the domestic market.

CHAPTER III. POLICIES FOR THE DEVELOPMENT OF THE SUPPORTING INDUSTRIES

1. INDUSTRIAL DEVELOPMENT POLICIES

1.1 INDUSTRIAL DEVELOPMENT POLICIES IN REPELITA VI

1.1.1 The Second Long-term Plan

The formulation of the Sixth Five-year Development Plan (Repelita VI) and the Second Long-term Plan were started by the cabinet which was formed in March, 1993, and they were announced in January, 1994, with the annual budget for the year 1994/95.

The Second Long-term Plan seeks to establish a strong and modern industrial sector that is capable of promoting a self-reliant and dependable economy. The industrial sector is projected to contribute about 32.5% of GDP, based on constant prices during the 1989/90 fiscal year, at the end of the plan period. The industrial sector is projected to employ 19.0 million people or 27.5% of the new entries to the work force. At the close of the plan, the industrial sector will employ 28.9 million people.

The targets for the industrial sector are as follows:

i. Average annual growth rate of added value: 9.2%
ii. Average annual growth rate of employment: 4.4%
iii. Average annual growth rate of manpower productivity: 4.8%

1.1.2 Development Policies for the Industrial Sector in Repelita VI

The objectives of industrial development in the Sixth Five-year Development Plan (Repelita VI) are to achieve a sufficiently high growth rate so that industry can become the main vehicle for stimulating economic development, and so that a stronger and more diversified industrial structure can emerge supported by increased technological capabilities and the ability to produce high quality products capable of penetrating international markets; to promote the

growth of small and medium size industries, including rural industries; and to broaden the regional distribution of industry, particularly in the eastern part of Indonesia.

1.1.3 Target of Industrial Development in Repelita VI

Industry is targeted to grow at an average annual rate of 9.4 percent. Growth target by sector is as shown below:

Table 3-1-1 Targeted Growths in the Added Value of Processing Industries
(Average Annual Rate of Growth)

Industries	Repelita V*	Repelita VI
Processing industries	8.8%	9.4%
Non-oil/gas manufacturing	10.8%	10.3%
Agro-industry	8.3%	8.2%
Basic metals and capital goods, including industrial machinery and equipment, transportation equipment, electronics and telecommunications	12.3%	12.6%
Chemical	8.8%	9.7%
Other important products (textile, etc.)	13.5%	13.0%

Note: *Estimated based on records during the 1993/94 fiscal year.
Source: *Repelita VI*, BAPPENAS

1.1.4 Industrial Development Policies in Repelita VI

The strategies to be taken for the achievement of the target are as follows:

i. To develop broad-spectrum industries oriented towards the international market, natural resource-intensive industries with a rising skill-intensive level over time, and technology-intensive industries;
ii. To develop industries by accelerating technological mastery in order to solidify the base for producing superior industrial products;
iii. To develop industries which rely on the market mechanism, with the private sector in the lead; and
iv. To develop industries which emphasize growth and income distribution by giving priority to those industries capable of fast growth and improving the participation of the broader community.

The priorities for industrial development include the following industries:

i. agro-indusry;
ii. mineral processing industries;
iii. machinery, capital goods and electronics industries, including industries which produce components and engage in sub-assembly; and
iv. export-oriented industries (textile, etc.)

Policy measures undertaken for the development of the machinery, capital goods and electronics industries include:

i. To improve the types, quality, and performances of products;
ii. To develop technological infrastructure, and standardization of products;
iii. To develop small- and medium-sized suppliers and support industries through business partnership with large-scale industries;
iv. To improve linkages between industry and other sectors;
v. To develop further strategic industries.

1.2 INDUSTRIAL DEVELOPMENT POLICIES FOR THE AUTOMOTIVE INDUSTRY

1.2.1 Outline of the Policies for the Automotive Industry

The Government of Indonesia started to lay the basic foundation for the automotive industry in 1969. The Indonesia government stated that licensed sole agents or brand holders could import vehicles in the form of CBU or CKD in 1969. SKD imports were prohibited. (The Trade Minister's Decree No. 4, 1969, and The Industrial Minister's Decree No. 15, 1969)

For the purpose of developing local manufacture, importation of all CBU vehicles was prohibited in 1974 modifying the former prohibition of CBU imports of commercial vehicles and used vehicles. (The Industrial Minister's Decree No. 25, 1974) At the same time, the government adopted the automotive industry policy which restricted knock-down assembly to local capital assemblers. This protection brought about the industry where 16 assemblers and 21 sole agents, six of which were also assemblers, produced and sold approximately 30 different makes of vehicles.

The government moved to full localization policy for commercial vehicles in 1976. (The Financial Minister's Decree No. 979, 1976) The import duties on CKD for commercial vehicles were reduced.. Although import duties on CKD for passenger vehicles were set 100%, those for commercial vehicles were 0 - 10%. As a further step to increase the use of local components for commercial vehicles, a new local content policy, Deletion Program, was put into force in 1976. (The Industrial Minister's Decree No. 307, 1976) The use of such items as radiators, tires, and batteries was required. Localization scheduled up to the target year 1984 by type of components was set. However, the localization of functional parts such as engines was not achieved by the target year and the plan was postponed several times.

The Deletion Program was temporally suspended in 1978 under the stagnated demand for automobiles. However, in 1979, the localization program was again put into force. (The

Industrial Minister's Decree No. 168, 1979) In 1983, the Indonesian government announced that the obligatory localization of functional parts would start in 1984. (The Industrial Minister's Decree No. 371, 1984)

The localization policy for commercial vehicles promoted investments and technical tie-ups from overseas and encouraged the development of the local parts and components industry.

The outcome of the commercial vehicle localization policy was not successful in terms of the progress of localization. The competition among parts suppliers was not sufficient and, therefore, prices were high. As for assemblers, there was little difference in cost between paying import duties and buying locally.

In order to break through this situation, the government reviewed the localization policy in 1987. (The Industrial Minister's Decree No. 34, 1987) The regulations in 1987 determined two localization schedules of parts and components: those that must be produced locally for use in commercial vehicles (particularly those under 2.5 tons), and those with vehicles that may be imported. As for the former, there were two sub-groups: 40 components which were already localized and were immediately prohibited from import (to be applied to all commercial vehicles under 24 tons), and 92 components with localization deadlines (primarily for commercial vehicles under 2.5 tons). The deadlines varied from 1987 to July 1990.

Table 3-1-2 List of Items under the Deletion Program Announced in 1987

Sub-group	Major Items	
Component items prohibited from import for use in commercial vehicles under 24 tons	Tires, paint, batteries, leaf springs, shock absorbers, safety glass, radiators, mufflers and tail pipes, plastic & rubber parts (except steel inserts, seats & seat frames, wheel rims, cabins, rear bodies, fuel tanks, chassis frames, radiator hoses, air cleaner hoses, air filter elements, cables, labels/stickers/name plates, grilles, wiring harnesses, brake tubes (except diameter 10 mm & up), fuel tubes (except diameter 10 mm & up), head linings/roof insulators, door trims, sun visors, floor mats, mudguards, grip assists, pull handles, bezels/cover doors, brake drums, engines, transmissions, axles, propeller shafts, steering systems, clutch systems, brake systems	
Commercial vehicle components scheduled for import prohibition between 1987 and mid-1990*	Engine Assembly Group: 16 items	Intake manifolds, cylinder head covers, fan belts, cylinder blocks, starter motors, cylinder heads
	Transmission Assembly Group: 22 items	Speedometer gears, transmission covers, extension housings, clutch housings, gears, synchroniser sleeves
	Clutch Assembly group: 14 items	Torsion springs, straps, pressure plates, spring seats
	Electric Group: 1 item	Battery cables
	Steering System: 8 items	Steering wheels, steering shaft, gears
	Axle/Propeller Shaft Group: 16 items	Companion flanges, pinion shafts, rear axle shafts, differential cases, tube yokes
	Suspension Group: 1 item	Shock absorbers
	Brake System Group: 12 items	discs, brake linings, cylinder wheels, pistons, brake drums
	Body Frame Group	Jacks, tools

Note: *Primarily refers to commercial vehicles under 2.5 tons and for machining only in other cases.
Source: Decree of the Ministry of Industry No. 34/M/SK/2/1987

In 1990, the government allowed the importation of 37 thousand commercial vehicles in response to the rapid increase in demand. In June, 1991, the government announced the lifting the ban on CBU imports with some limitations. However, the government again prohibited CBU imports in July, 1992, in response to the drop in domestic demand due to the high interest policy against inflation.

In 1991, the government considered the national people's car plan, which would produce low-priced passenger vehicles of 1.5 liter class. In this plan, tax incentives at the same level

as commercial vehicles should be given to cars locally manufactured satisfying two conditions: more than 73% localization ratio, and sales prices of 17.5 million Rp. or less.

Up to 1993, the government had promoted the localization of components according to the deletion program. However, in June, 1993, the government issued an automotive deregulation with an open policy. Deregulation included the following:

i. Conditional lifting of the ban on CBU imports. Importation of CBU is allowed through registered importer or sole agent for four-wheel vehicle that is not produced domestically yet and through general importer for those which had been produced domestically.
ii. Introduction of incentive system where import duties on CKD and components are decided according to the level of local content achieved.
iii. Reduction in luxury tax. Luxury tax was reduced from 35% to 20% for sedans of 1,600 cc or less, the local content of which is more than 60%, and from 20% to 0% for buses.

In 1994, the restriction on foreign investment was relaxed. The luxury tax on commercial vehicles of middle size or larger was abolished and import duties on CBU were reduced by taking away 25%. In 1995, the government announced a further reduction in import duties and the import duty reduction schedule up to 2003.

In June, 1996, the luxury tax was exempted for sedan-type passenger vehicles with engines of 1,600 cc or less and with the localization ratio over 60%, according to the Prime Minister's Decree No, 36, 1996.

Table 3-1-3 Import Duty and Reducing Schedule of Import Duty on Motor Vehicle

Passenger Cars/Station Wagons

	Year		
	1994	1995	2003
1. Produced domestically			
- Import duty	175%	125%	40%
- Surcharged	0%	0%	0%
- Non tariff barrier	IU	IU	IU
2. Not produced domestically			
- Import duty	175%	125%	40%
- Surcharged	100%	75%	50%
- Non tariff barrier	IT/AT	IT/AT	IU
3. Remaining CKD			
- Import duty	100%	65%	25%

Commercial Vehicles

	Year		
	1994	1995	2003
1. Produced domestically			
- Import duty			
1) Kat I (Pick Up)	60%	50%	30%
2) Minibus	100%	75%	30%
3) Kat II, III	40%	40%	30%
4) Kat IV	100%	75%	30%
5) Kat V	5%	5%	5%
- Surcharged	0%	0%	0%
- Non tariff barrier	IU	IU	IU
2. Not produced domestically			
- Import duty			
1) Kat I (Pick Up)	60%	50%	30%
2) Minibus	100%	75%	30%
3) Kat II, III	40%	40%	30%
4) Kat IV	100%	75%	30%
5) Kat V	5%	5%	0%
- Surcharged			
1) Kat I (Pick Up)	40%	30%	20%
2) Minibus	40%	30%	20%
3) Kat II, III	40%	30%	20%
4) Kat IV	40%	30%	20%
5) Kat V	0%	0%	0%
- Non tariff barrier	IT/AT	IT/AT	IU
3. Remaining CKD			
- Import duty			
For Kat I & IV	40%	25%	15%
For Kat II & III	30%	25%	15%
For Kat V with master list	0%	0%	0%

Note: IU: General Importer IT/AT: Registered importer and sole agent
Source: MOIT

Table 3-1-3 Import Duty and Reducing Schedule of Import Duty on Motor Vehicle (Continued)

Motorcycles

		Year		
		1994	1995	2003
1. Under 250 cm3	Produced domestically			
	- Import duty	40%	35%	20%
	- Surcharged	0%	0%	0%
	- Non tariff barrier	IU	IU	IU
	Not produced domestically			
	- Import duty	40%	35%	20%
	- Surcharged	0%	0%	0%
	- Non tariff barrier	IT/AT	IT/AT	IU
2. Above 250 cm3	- Import duty	100%	75%	50%
	- Surcharged	100%	75%	50%
	- Non tariff barrier	IT/AT	IT/AT	IU
3. Remaining CKD				
- Import duty		30%	25%	10%

Note: IU: General Importer IT/AT: Registered importer and sole agent
Source: MOIT

Table 3-1-4 Import Duty for Automotive Parts and Components

Import Duty on CKD Units

	Local Content						
	Less than 10%	Less than 20%	30% or less	40% or less	50% or less	60% or less	More than 60%
Passenger cars and station wagons	65	65	50	35	20	10	0
Commercial vehicles (Cat. I & IV)	25	25	15	10	0	0	0
Commercial vehicles (Cat. II & III)	25	25	15	0	0	0	0
Two-wheel vehicles	25	25	15	10	0	0	0

Import Duty on Components

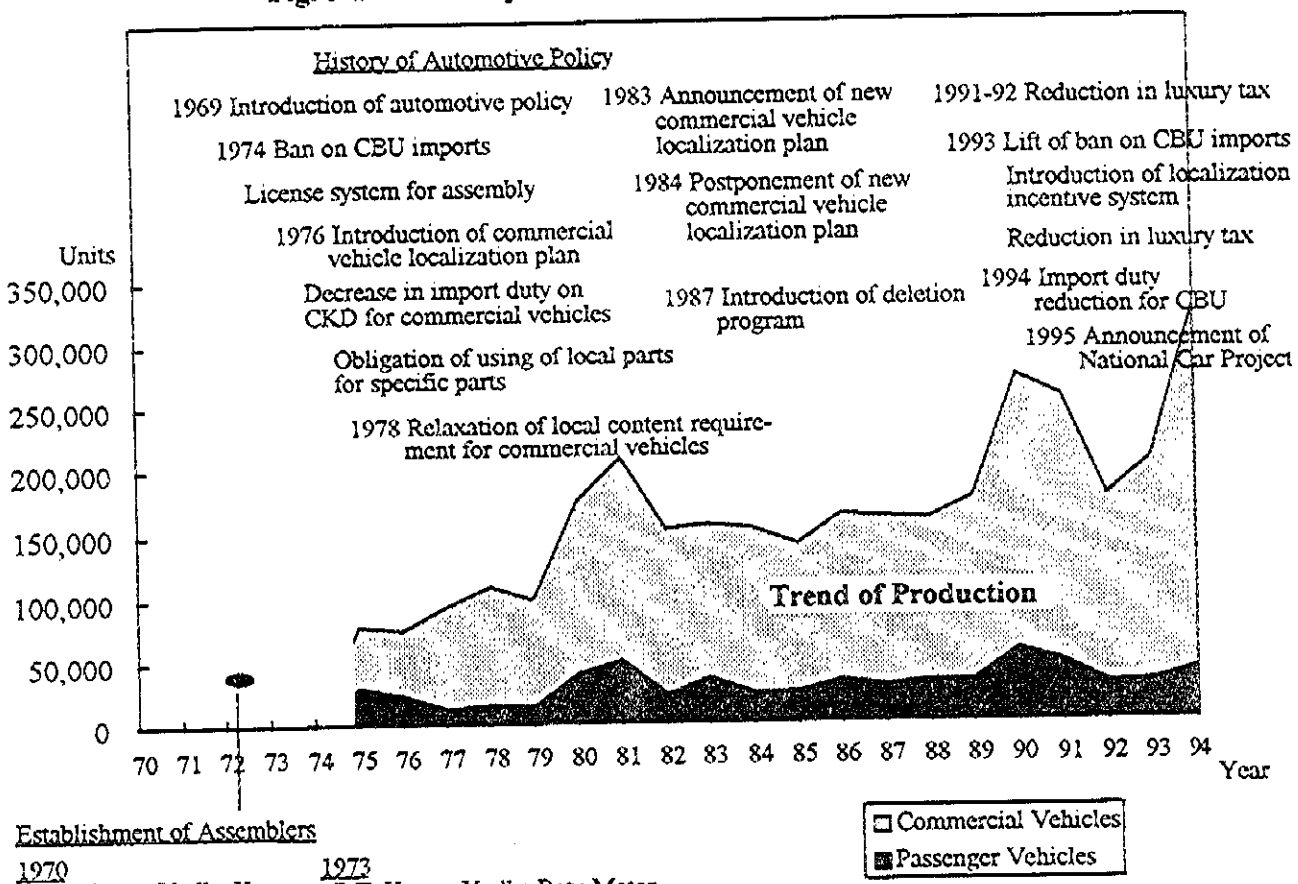
	Local Content						
	Less than 10%	Less than 20%	30% or less	40% or less	50% or less	60% or less	More than 60%
Passenger cars and station wagons	25	25	15	10	0	0	0
Commercial vehicles (Cat. I & IV)	25	25	15	10	0	0	0
Commercial vehicles (Cat. II & III)	25	15	0	0	0	0	0
Two-wheel vehicles	25	25	15	10	0	0	0

Import Duty for Component Manufacturers

	Local Content				
	Less than 10%	Less than 20%	30% or less	40% or less	More than 40%
Sedan components & Commercial vehicles Cat I & IV	25	25	15	10	0
Commercial vehicles Cat. II & III	25	15	0	0	0
Two-wheel vehicles	25	25	15	10	0

Source: MOIT

Fig. 3-1-1 History of Automotive Industry Policies in Indonesia



1.2.2 National Car Program

In February, 1996, the Government of Indonesia established the Program Mobil Nasional (MOB-NAS) or National Car Program. The objectives of the program are as follows:

i. To promote the international competitiveness of Indonesia's production of automobiles and automotive parts
ii. To develop the capacity to multi-source automotive parts and components

The program is based on Presidential Instruction No. 2/1996 that directed the Minister of Industry and Trade, the Minister of Finance, and the Minister of Investment/Chairman of Investment Coordinating Board to take necessary actions to bring the national car industry to realization by providing guidance as well as tax facilities according to prevailing regulations.

Eligibility for the program includes the following criteria:

i. the car brand to be developed must not have been registered by any other party in Indonesia
ii. the relevant car technology, design and engineering will be developed in stages using national capability

A manufacturer meeting the requirements established by the Minister of Industry and Trade and qualifying as a pioneer company will be given exemption of import duty for importation of components not yet produced locally as well as relief from sales tax on luxury goods (PPnBM). The requirements include guidelines concerning the legal status of the production company (100% local capital) and local integration (20% for the first year, 40% for the second year, and more than 60% for the third year).

P.T. Timor Putra Nasional was given pioneer status under this program in February, 1996.

In June, 1996, the Indonesian government approve that P.T. Timor Putrra Nasional imported 45,000 units of CBUs from South Korea without paying import duties. This company was obliged to export local parts and components to the partner company in South

Korea, Kia Motors, and send their workers there to engage in the production in order to satisfy the conditions for a national car. This treatment was effective until June, 1997.

Such countries as Japan, USA, and the Europe, criticized that this treatment might be against the regulations of WTO.

1.3 INDUSTRIAL DEVELOPMENT POLICIES FOR THE ELECTRIC AND ELECTRONIC INDUSTRY

1.3.1 Basic Policies for the Electric and Electronic Industry

(1) Development Target in REPELITA VI

The target of the electronics industry at the end of REPELITA VI is as follows:

- Export	US$6.0 billion
- Production	US$10.0 billion
- Additional employment	140,000 people

A two step strategy has been adopted to attain the target as follows:

First Step: To enhance the competitiveness of the electronics industries by developing design and engineering capabilities

To foster design and engineering capabilities, the applied R&D activities will be promoted with the cooperation from universities and research institutes. Joint applied R&D programs will be developed among the private sector and universities/research institutions. Outcome of the programs are to be transferred to enterprises which will lead to commercialization.

Second Step: To develop export oriented electronics industries. Indonesia's comparative advantages are important factors to be offered to foreign investors. Also, further steps in the development of infrastructure will be undertaken.

Export-oriented multinational enterprises which have relocated into Indonesia, mainly producing consumer electronics equipment and electronic parts, have been growing. The investment and business climate will be improved to attract further relocation by multinational enterprises. At the same time, the linkage between the export-oriented electronic parts industry and the local downstream industry will be developed.

(2) Major Development Policies for the Electric and Electronic Industry

The following programs are pursued to foster the domestic electric and electronic industry.

i. To foster the attractiveness of Indonesia as a production and export base.

The measures to be taken are:

- To simplify foreign trade procedures. This would improve the productivity and shorten the production cycle time.
- To provide tax incentives to foreign investments and relax the restriction on the ratio of foreign capital.
- To increase production districts which provide such facilities as simplified procedures and incentives, in order to raise Indonesia's attractiveness as production base for the export-oriented electronics industry.

ii. To increase the interrelation among multinational enterprises

The interrelation among export-oriented multinational enterprises within EPTE and the electronics industry outside EPTE are reinforced through the following measures:

- To increase the production capability of the electronics industry outside EPTE.
- P.T. LEN Industri and universities are directed to support the capability improvement mentioned above.
- To create the business climate which can facilitate the growth of interrelation.
- To utilize both multilateral and bilateral technical assistance to upgrade the production capability of the electronics industry outside EPTE.

iii. To develop technological tools and infrastructure

Technological tools and infrastructure are developed to support the improvement in production capability, designing & engineering capability, and manpower capability.

- To develop the national information network.

This starts with the development of the industrial database and information network limited to the Ministry of Industry and Trade and, at the next step, will be expanded to the private sector information network. The above information network will be expanded to access the global information network.

The development of the national information network will be the growth base for the information technology industry which can produce hardware and software for the use of the information services mentioned above. The captive market which will appear as a result of the development of the national information system will promote the mastery of the information technology and technology concerning electronics components.

- To establish a quality testing laboratory.

A quality testing laboratory which is accredited from an international quality testing institute will be established so that the certificates necessary for exports can be issued in Indonesia.

- To establish a manpower training center.

An industrial manpower training center will be set up to train specialists and skilled workers in the electronics industry.

- To establish an applied R&D center.

An applied R&D center will be developed which the industry can use for the product development and where they can receive the support of planners and researchers from R&D institutes and universities.

The centers mentioned above will be established in Bekasi, West Java, where the export-oriented electronics industry has already grown up.

iv. To develop human resources

Human resource development will be promoted through the following measures:

- To hold meetings of representatives from the government, industry sector, and educational institutes to examine the need for manpower and whether and what kinds of training is necessary.
- To include representatives from industrial associations and foreign chambers of commerce an the politeknik advisory board.
- To coordinate with related agencies to decrease the incompatibility between the skilled workers produce and the needs of the industry sector.
- To encourage the expansion of education outside schools and the development of national-level standards and qualifications.
- To examine the possibility of the cooperation with the foreign side to produce highly skilled workers.

v. To upgrade standardization

Standardization will be promoted through the following measures:

- To develop standardization which can support the use of the captive market for technological improvement and the development of local electric, electronic, and telecommunication industries.
- To upgrade standardization to support the expansion of the linkage between the upstream and downstream industries.
- To develop standardization which can promote exports and improve the product quality of local electric, electronic, and telecommunication industries.

vi. To harmonize import duties.

Import duties on raw materials, components, parts, and finished goods will be harmonized to raise the competitiveness of electric, electronic, and telecommunication industries.

vii. To provide R&D activities with incentives.

Measures to give incentives to R&D activities, above all, the abolition of taxation on R&D activities, will be taken to stimulate applied R&D activities.

viii. To create a center of excellence.

The role of P.T. LEN Industri and P.T. INIT as the center of excellence will be intensified to improve the production capability, and design and engineering capability of the local electronics industry.

In addition, the trends of growth, strategic climate, and technological development of the world electronics industry will be continuously observed.

ix. To establish a database on the electronics industry.

The establishment of a database on the electronics industry will be continued.

1.3.2 Measures for the Development of the Electric and Electronic Industry

The Ministry of Industry and Trade currently carries out the following measures to promote the development of the electric and electronics industry.

i. Development of the Electronics Component Industrial Estate (Lingkungan Industri Komponen Elektronika, LIKE)

LIKE is under planning with the purpose of developing the electronics component industry. Enterprises located in LIKE can enjoy the following incentives:

- A warehouse which holds the status as a special electronic components warehouse (Entrepot Partikelir Komponent Elektronika, EPKE) can receive the following benefits:

* Pre-shipment inspection is not required for imports of raw materials and spare parts.
* Import duties are exempted for raw materials and spare parts.

- The following import duties are imposed when imported raw materials and spare parts are brought into the country.
  * Import duties of 0% for items of which import duties are 10% or less.
  * import duties of a maximum of 10% for items of which import duties exceed 10%.
- Exporting enterprises can use the facilities of Bapeksa.

LIKE is located in Purwakarta, 90 km east to Jakarta. The land area is 232 ha.

ii. Promotion of joint development and common facilities.

In addition to the use of the captive market in the telecommunication and electricity sector, joint development and common facilities have the following effects:

- To reduce imports and public expenditures on infrastructure.
- To develop a self-dependent electric, electronic, and telecommunication industry.

The government's purchase contributes to the following:

* To develop industrial infrastructure in the form of common facilities which carry out such functions as R&D, human resource development, standardization, and certification.
* To develop medium and small-scale partners in the field of the electronics industry, especially the telecommunication industry.
* To develop technological capability.

iii. Preference for local products in the government's purchase based on the Presidential Instruction No. 16/1994 contributes to the development of more competitive local industries.

The following is proposed based on the above.

Purpose	To establish a joint development system between P.T. Telekom and the local telecommunication industry within 5 years.
Merit of enterprises participating in the joint development	Purchase guarantee of P.T. Telekom
Obligation of enterprises participating in the joint development	- To bear expenses for common facilities - To carry out R&D or product & system development. - To develop medium- and small-scale partners through subcontracting.

iv. Promotion of cooperation among the public sector and vendors and realization of the common facilities as for government purchase of data processing and information system equipment.

v. The following measures are proposed to support the above programs.

- Enterprises which participate in joint development on the basis of outcome of R&D can receive the following incentives:
  * Tax exemption on R&D expenses
  * Import duty exemption on parts and raw materials
  * Luxury tax exemption
- Government enterprises provide 1 - 5% of profits for common facilities.
- The government purchase is proposed to contribute to manpower development at the implementation of the Presidential Instruction No. 16/1994
- Among the annual budget for purchase of transmission and telephone office equipment, 0.5% is allocated to expenses for applied R&D in the telecommunication sector.

In addition, the following measures are carried out or examined:

- Review of luxury tax on consumer electronics products,
- Import duty exemption on materials and parts for CRT production,
- Simplification of drawback for EPTE enterprises which sell to non-EPTE enterprises,
- Facilitation of lending procedures of production equipment among EPTE, etc.

1.4 INDUSTRIAL POLICY FOR THE MACHINERY AND ENGINEERING INDUSTRY

1.4.1 Recent Action

With the progress of globalization, the Indonesian Government considers that the improvement of the competitiveness of the Machinery and Engineering Industry is required. The improvement in competitiveness will lead to the decrease in capital goods imports and the expansion of industrial goods exports.

With the purpose of strengthening the competitiveness and expanding investments, the following two approaches are pursued:

i. In order to strengthen the competitiveness of the industry, the following steps are taken:
   - Reduction of tariff on imports of raw material and components
   - Reduction of tariff on imports of machinery in order to promote the downstream industries, and as a result, provide opportunities for the local machinery industry (parts and components industries); and to strengthen the competitiveness of processing industries, especially the export-oriented industry.

ii. To expand the market for the machinery and engineering industries through cooperation in the field of international trade, for example, the General System of Trade Preferences (GSTP).

As the implementation of the above approaches, a deregulation package was put into force on May 23, 1995. This package included:

i. The utility boiler category was deleted from the Negative List of Capital Investments.
ii. Import duty and import surcharge relief for machines and equipment as well as basic/auxiliary materials within the framework of business restructuring.
iii. Exemption of import duty for samples (only three for each brand/model/type).
iv. Announcement of Import Duty Reduction Plan.
v. Importation of CKD for certain machinery items such as gasoline motors, diesel mo-

tors, pumps (centrifugal and rotary), sewing machine, electric motors, and arm tractors.

vi. Import tariffs were reduced for 487 items in the area of the machinery and engineering industry.

In addition to the above, the following efforts are made for the development of the industry

i. Promotion of the Indonesian National Standards (SNI)
ii. Preference for local products in the Government's procurement
iii. Promotion of projects with technical cooperation from overseas countries and organizations, such as Machine Tools & Development Centre - Indonesia, and Industrial Technology - Transfer Center Network, etc.
iv. Promotion of linkage within the machinery and engineering industry

1.4.2 Future Policies

The Ministry of Industry and Trade is proposing the introduction of further measures for the improvement of the industry's competitiveness and the increase in investments in such forms as tax holidays, reductions in corporate tax, low-interest loans, and the simplification of procedures.

As for the future development of the industry, the development priority is placed on the following areas:

i. Machinery which has competitiveness in the global market
ii. Domestic markets which will increase and repeat
iii. Technologies of which the technological level is high in Indonesia are as follows: Foundry, manufacturing, metal joining, assembling, metal forming, metal cutting

Priority products are classified into three categories as follows:

i. Group 1: Products with competitiveness in the international market
   Handling equipment, cold storage equipment, industrial boilers, pressure vessels, heat exchangers, steel construction, electric motors & generators, pumps, water treatment plants

ii. Group 2: Products with the potential of competitiveness in the international market

Circuit breakers, industrial valves, food processing equipment, machinery & spare parts for paper plants, simple machine tools (for metal forming), basic machine elements (e.g., gears, shafts, bearings), industrial fans & blowers, mechanical seals, construction equipment, (e.g., AMP, stone crushers), simple printing machines, transformers, (for power, distribution, & control), packaging equipment (e.g., bottling, canning, filling), dryers for agricultural products, spare parts for textile machinery, cutting tools for wood

iii. Products which should be developed immediately for the domestic market

Cooling towers, textile machinery (for preparation & finishing), tooling (molds, dies, jigs, & fixtures), machine tools for wood, machinery for rubber processing, machinery & equipment for palm oil processing plants, small diesel engines, forging products, machinery & equipment for plastic processing, casting products, machinery & equipment for sugar cane processing plants, hand tools, simple machine tools (for metal cutting)

1.5 SMALL AND MEDIUM SCALE INDUSTRIES DEVELOPMENT POLICIES

1.5.1 Definition of Small and Medium Scale Industries (SMIs)

There is no single definition of small and medium scale industries (SMIs) in Indonesia. Government agencies use the terminology SMIs for the purposes of their policy implementation, based on the following criteria:

Size of assets:	Ministry of Industry and Trade, Ministry of Cooperatives and Small Enterprise, and Bank of Indonesia:
Number of employees:	Central Statistics Bureau

The Ministry of Industry and Trade defines small scale industries as those with assets less than Rp. 600 billion in the manufacturing sector.

Table 3-1-5 Definition of Enterprises in Indonesia

Agency	Definition	
Ministry of Cooperatives and Small Enterprise	Whole Industries	Small enterprises are those with less than Rp. 200 million of assets excluding land and buildings, with less than Rp. 1 billion of annual turnover, possessed by Indonesian nationals, and not an affiliate or branch of large and medium scale enterprises. (According to the Small Enterprise Law)
Ministry of Industry and Trade	Manufacturing Industry	Small scale industries are those with less than Rp.600 million of assets excluding land and buildings, and held by Indonesian nationals.
	Commerce and Service Industry	Small scale industries are those with less than 25 million of net assets. Medium scale industries are those with net assets of Rp.25 - 75 million. Large scale industries are those with net assets exceeding Rp. 75 million.
Bank of Indonesia	Whole Industries	Small scale industries are those which satisfy the following two conditions. i. Capital excluding land and buildings is Rp. 40 million or less (100 million Rp. or less for a manufacturing industry) ii. Pribumi hold 50% or more of the capital and the majority of directors are pribumi. Or pribumi hold 75% or more of the capital.
Central Statistics Bureau	Manufacturing Industry	Number of Employees Household industries: 4 or less Small scale industries: 5 - 19 Medium scale industries: 20 - 99 Large scale industries: 100 or more

According to the definition of the Ministry of Industry and Trade, in the manufacturing sec-

tor, there are 2,107,090 small scale industries as of the end of 1994 (provisional), with a total production value of Rp. 21,892.2 billion and a total of 7,674 thousand employees.

1.5.2 Small Scale Industries Development Policies

(1) Small Scale Industries Development Policies in Repelita VI (1994 - 98)

Table 3-1-6 shows the progress of small scale industry development policies in the past development plans.

Objectives of small and medium industries development in Repelita VI are: increase in jobs, business opportunity expansion, more equitable distribution of income, creation of balanced relationship between public participation and a business management, promotion of economic activities in neglected areas, and the development of small and medium industries which provide sources of industrial growth. Policies on the development of small and medium industries focus on promotion of mutually beneficial working relationships and partnerships between large industries and small to medium industries. Regulatory and institutional instruments are also secured to ensure the continued existence of small and medium industries.

Main activities to be carried out during Repelita VI are as follows:

i. Human resource quality improvement

Education and training are implemented through achievement motivational training, on-the-job training, apprenticeships, and business development training and counseling

Table 3-1-6 Major Small Scale Industry Development Policies in the Past

Repelita	Direction of Small Scale Industry Development and Major Actions
Repelita I (1969-73)	Development plans for the light industry and handicraft industry dealt with small scale industry development.
Repelita II (1974-78)	Total scheme for small scale industry development covering guidance, provision of production facilities, credits, and marketing was introduced. 1974: Introduction of Small Investment Credit (KIK), and Permanent Working Capital Credit (KMKP) 1974: Start of Small Scale Industry Guidance and Development Program (Bimbingan dan Pengmenbangan Industri Kecil, BIPIK). Kredit Mini was introduced. 1978: Establishment of BPIK in the Ministry of Industry
Repelita III (1979-83)	The strengthening of existing measures and organization of small enterprises were promoted. *Sentras* was expanded to the whole nation. Bapak Angkat system was introduced. 1979: Preference to small scale industries in the government's purchase*1 and allocation of specific businesses to small enterprises*2 were started. 1979: Introduction of KK(Kredit Kelayakan) 1979: Introduction of LIK and UPT 1980: Introduction of Kredit Midi
Repelita IV (1984-88)	The expansion of existing measures, promotion of entrepreneurs, and strengthening of the linkage between small enterprises and the public sector/private sector were promoted.. Support to small enterprises through Sentra Industri Kecil was started. Bapak Angkat system*3 was encouraged. In this system, the linkage between companies which give orders and subcontracting companies was to be strengthened. At the period of Repelita V, the government enterprises took initiative.
Repelita V (1989-93)	The improvement in skills, technologies, and productivity was pursued. The improvement in management capability and self-dependence through the expansion of labor opportunity, business opportunities, and exports were promoted. Small enterprises were organized through the expansion of *sentras* and cooperatives*4. Bapak Angkat system was further encouraged. 1989: Introduction of system where 1 - 5% of profits of national enterprises are used to support small enterprises. 1990: Stop of new credits under KIK and KMKP

Note: *1 Public organizations such as governmental organizations, national enterprises, and state-owned enterprises, are obliged to give priority to local products, Pribumi enterprises, and local enterprises in ordering and purchasing. A non-Pribumi enterprise which receives an order from a public organization must set up a partnership with a Pribumi enterprise.

*2 Large and medium scale enterprises are prohibited to enter specific industries. Totally 145 industries are designated only for small scale enterprises.

*3 This program is encouraged to develop the linkage between large enterprises and small enterprises. Bapak Angkat (foster parent), which gives orders, is expected to support a subcontractor, which is financially and technologically less competent, through such activities as management guidance, technical guidance, employee training, etc. This program was initiated by national enterprises during the period Repelita IV. The government has been asking the private sector including foreign enterprises to participate actively in this program.

*4 The organizing of small enterprises was promoted through the promotion of SENTRA at the first stage. However, since Repelita V, the emphasis has been placed on Scale Industry Cooperative (Koperasi Industri Kecil Kearjinan, KOPINKRA). KOPINKRA takes the form of a cooperative and carries out such activities as sales of products, purchase of materials and spare parts, financing, and improvement of members' technological and management capabilities.

ii. Development of cottage and rural industries

Activities for development include creation of affinity business groups and centers, skills training, technical assistance, information services, participation by non-profit community organizations, cooperation between agencies concerned and the business world not only in the delivery of guidance but also in the supply of electric and transportation facilities, and skills training for farmers who wish to work in industries.

iii. Development of small and medium industries

Growth of small and medium industries is achieved through the promotion of sub-contracting, i.e., supply of raw materials and components, and sub-assembling services.

Sub-contracting is pursued through support by innovative technologies, development and application of standards, training in technologies and management, development of components meeting requirements of domestic and international markets, assistance in product promotion, and increase in mutually profitable business partnerships.

iv. Development of a system to support small and medium industries

The following are pursued to support small and medium industries:

- Upgrading of education and training facilities, adjustment of the methods of instruction, and increase in the roles of the business world and non-profit organizations
- Industrial research and development, provision of technical services, and enhancement of UTPs
- Provision of sites and basic facilities and provision of forums for the development of small and medium industries by industrial estates
- Expansion of loans to small and medium industries by banks and financial institutions

- Establishment of design centers
- Promotion of partnership by existing institutions
- Expansion and deployment of affinity business groups and cooperatives among small and handicraft industries
- Sponsorships of conventions for experts from the capital city and provincial centers

(2) Institutional Set-up for the Development of Small Scale Enterprises in Indonesia

Several ministries and organizations are engaged in the development of small scale enterprises. Major related ministries and organizations are as follows:

- Ministry of Cooperatives and Small Enterprise
- Ministry of Industry and Trade
- Ministry of Manpower
- Ministry of Internal Affairs
- Ministry of Agriculture
- Bank Indonesia

The Ministry of Cooperatives and Small Enterprise and Ministry of Trade and Industry, especially, play an important role in the development of small scale industries.

(3) Small Enterprise Law

The Ministry of Cooperatives and Small Enterprise issued the Small Enterprise Law, basic policies for the development of small enterprises, on December 26, 1995. The law consists of 38 articles in 11 chapters as follows:

Chapter 1	General Rules (Article 1)
Chapter 2	Principles and Target (Article 2 - 4)
Chapter 3	Scope (Article 5)
Chapter 4	Business Environment (Article 6 - 13)
Chapter 5	Development (Article 14 - 20)
Chapter 6	Finance and Guarantee (Article 21 - 25)
Chapter 7	Partnership (Article 26 - 32)
Chapter 8	Coordination and Guidance (Article 33)
Chapter 9	Punishment (Article 34 - 35)
Chapter 10	Punishment by the Administration (Article 36)
Chapter 11	Conclusion (Article 37 - 38)

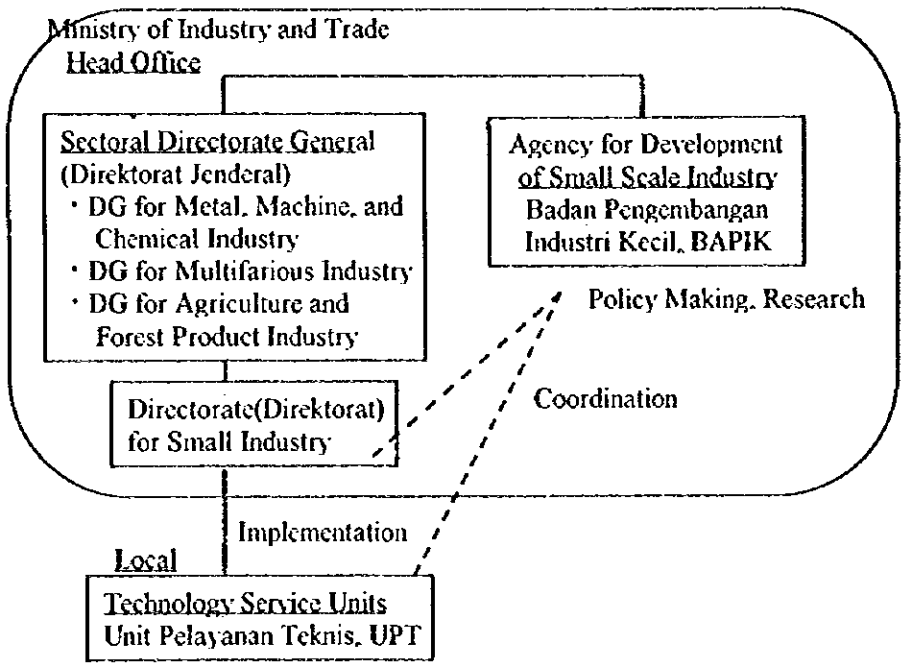
The characteristics of this law are as follows:

- Small enterprises are newly defined.
- Supportive measures to small enterprises, including Bapak Angkat, are arranged in order.
- Punishments for breaking the law are regulated.

(4) Institutional Set-up for the Development of Small Scale Industries in the Ministry of Industry and Trade

In the Ministry of Industry and Trade, the Agency for Development of Small Scale Industry (Badan Pengembangan Industri Kecil, BAPIK) is in charge of policy making, research, and coordination of related agencies for small scale industry development. The Directorate for Small Scale Industry under each Directorate General specializes in specific industries, and local offices are in charge of the actual implementation of development programs.

Fig. 3-1-2 Organization for the Implementation of Small Scale Development Policies



(5) On-going Programs

On-going programs for small scale industry development carried out by the Ministry of Industry and Trade are as follows:

i. Human resource development program

- Development of entrepreneurs

  Creation of Enterprises through Formation of Entrepreneurs, CEFE

  CEFE carries out training. During the period 1992 - 95, 2,494 persons were trained. This training program was modeled on the program carried out by GTZ, Germany.

  Achievement Motivation Training (AMT)

  AMT has been conducted since Repelita III. In 1995, 2,400 persons in 27 provinces were trained.

- Management Capability Development

  Simple management training program is conducted for small scale enterprises with assets of Rp. 50 million or less. This program is carried out by the Ministry of Industry and Trade jointly with Bank Indonesia, the Ministry of Cooperatives, and the Ministry of Education and Culture.

- Technological and technical skills

  Technology training is conducted at *sentras* which are located throughout the country. Instructors are dispatched from BPPI in the Ministry of Industry and Trade.

  A *sentra* is an area where small enterprises engaging in a specific industry are gathered. There are two types of *sentra*: one is a *sentra* which has grown naturally out of voluntary and self-reliant efforts of a community in the rural area; and the other is a *sentra* which is created in a part of the urban area by relocating small scale industries according to city planning.

ii. Information and marketing development program

- Information development

Business Information System Offices (Warung Sistim Informasi, WARUSI) are established in three locations, Sukoharjo, Tasikmalaya, and Fandar Lampung. It is planned to expand WARUSI to the whole country.

WARUSI is a plan to establish a database on small scale industries and distribute information through the Internet.

WARUSI has the following three functions:

* Provition of information to small scale industries:
  WARUSI provides information on the market (including information on customers), on technologies, and on financing.
* Sales promotion of small scale industries:
  WARUSI provides sales promotion opportunity to small scale indutries.
* Function as a trade point:
  WARUSI supports small scale industries in their business negotiations and preparing of necessary documents.

WARUSI will construct a database of information of the industries, including directories of both large scale enterprises, and small scale enterprises. As for information concerning large scale enterprises, lists of parts which they want to purchase will be provided. As for information on small scale enterprises, corporate profile, name of contact person, e-mail address, etc., will be provided.

PT Pos Indonesia supports this project. PT Pos Indonesia offers Internet provider service and possesses approximately 300 nodes in the whole country. In 1997, the number of nodes will be extended to 600. PT Pos Indonesia also engage in the development of software required for the operation of WARUSI.

BAPIK plans to open a home page in the near future. The home page of WARUSI will be open in that home page.

WARUSI is presently at the stage of a pilot project. They are examining contents of services, operation methods, and appropriate organization through the project. Not only small scale enterprises but medium scale companies are covered by this database. Items of each company's data will be around 15, including company name, address, products, prices, name of contact person, telephone number, fax number, e-mail address, etc.

If this project is successful, WARUSI will be transferred to the private sector. In that case, the number of WARUSI will be increased at the initiative of the private sector.

- Marketing development

  Support for small scale industries in expanding access to markets, manufacture of prototypes, etc., is conducted.

iii. Kemitraan (Partnership) Development Program

Efforts are made to deepen the mutual relationship between small scale industries and large to medium industries. Such partnerships as purchase and sales of products, sub-contracting, and provision of assistance by large to medium industries are encouraged.

The partnership between small scale industries and large to medium industries is promoted through such measures as a forum for Bapak Angkat, UPAKARTI, an official commendation system, and activities by the Jimbaran Bali group.

Bapak Angkat means public and private individuals, cooperative and organizations which support small scale industies. Support can be given in such various forms as marketing, materials, training, financing, etc. By February 23, 1993, 14,645 Bapak Angkat had supported 90,819 small scale enterprises.

iv. Technology and quality management system development program

- Technology development

  Human resource development through technology training and the development of production systems and equipment by BPPI are conducted for the technology de-

velopment of small scale industries.

- Diffusion of ISO-9000 quality management system application

  The Ministry of Industry and Trade supports the introduction of ISO-9000 jointly with such quality management certification organizations as P.T. Sucofindo, ABIQA, B4T QSC.

- Small scale industries Quality Control Circles

  Small scale industries Quality Control Circles (Gugus Kendali Mutu, GKM) are promoted in order to upgrade the quality of small scale industries in a wider sense, i.e., in product, cost, delivery and productivity.

v. Programs to develop the initiatives of small scale industries

- Development of the role of women
- Development of small scale industries Joint Management Group (Kelompok Usaha Bersama, KUB)
- Development of Muslim boarding schools (Pondok Pesantren)

vi. Small scale industries pollution prevention program

vii. Development program for the Small Industries Service Organizations (Lembaga Pelayanan Industri Kecil, LPIK)

- Enforcement of Technology Service Units (Unit Pelayanan Teknis, UPT)

  UPT is a public organization to provide technological services under the Ministry of Industry and Trade. UPTs are equipped with personnel and equipment necessary to support small scale industries. According to data in 1993, there are 108 UPTs in 24 provinces. Each UPT is respected to a specific industry. Major industries which UPTs are involved in are engineering, machinery, wood processing, rattan, and textile. There are some UPTs which cover 2 or more industries.

- Mini Industrial Estates (Lingkungan Industri Kecil, LIK), Small Industry Village (Perkampungan Industri Kecil, PIK), and Working Facilities for Small Industries (Sarana Usaha Industril Kucil, SUIK)

  Since Repelita III, industrial estates for small scale industries were established. There are 15 LIKs in 7 provinces, one PIK and one SUIK. In LIKs, UPTs are

jointly established. However, there is a case that UPT was closed due to managerial problem in LIK.

The establishment of industrial estates for small scale industries has various problems such as financial burden for the government and high tenant fees.

In addition, BAPIK plays a coordinating role in the Small and Medium Industries Development Project (Proyek Penembangan Industri Kecil Menengah, Proyek PIKM). PIKM is a project which was developed by renewing BIPIK. PIKM mainly carries out such activities as i) human resource development, ii) entrepreneur development, iii) quality management capability development, iv) improvement in services of UPTs, v) partnership promotion, and vi) marketing promotion. Among the budget of Rp. 28.15 billion for 1995/96 for PIKM, 10.5% was allocated to BAPIK, 10.5% to sectral Direct Generals, and the rest to the local governments.

(6) Problems Concerning Small and Medium Industries Development

Small scale industries are important in terms of job creation, rural development, and more balanced income distribution. At the same time, small scale industries should contribute to the industrial development and improved competitiveness in Indonesia by serving as supporting industries to the assembling sector. The Indonesian government takes initiatives in both aspects in developing small scale industries.

From the view point of sub-contracting industries, the present competence of small scale industries is quite insufficient in technology and management capabilities. Especially, quality improvement and production technology improvement are urgent issues. The government stresses the participation of public and private large scale enterprises for the development of sub-contracting businesses with the emphasis on self-reliant efforts of small scale industries. These efforts should be supported by institutional assistance by the government , in the forms of i) creation of business climate which promotes subcontracting on the basis of the market mechanism, ii) technology development and changes in the business mind of small scale enterprises through technical guidance and training, iii) provision of facilities necessary for small industries development, and so on.

The following are pointed out as problems in development policies and measures concerning small scale industry development.:

i. The coordination among related ministries and organizations is not sufficient in providing supporting measures.

For example, financing is mainly administered by Bank Indonesia, education and training by the Ministry of Manpower and Ministry of Industry and Trade, and technical guidance by the Ministry of Industry and Trade.

The definition of small and medium enterprises differs according to ministries and organizations. The size of small scale enterprises defined by existing definitions is too small from the view point of supporting industry development. Making larger enterprises subject to public supportive measures for small scale industries should be considered.

ii. Duplication of supportive measures

There are similar schemes for small scale industries. There are cases where several organizations provide different schemes or programs for the same purpose. The coordination and integration of existing programs is required. At the same time, supportive programs should be modernized according to the needs of the industry.

iii. Obsolete facilities and equipment

For example, much of the machinery and equipment of UPTs under the Ministry of Industry and Trade has become obsolete. One of the bottlenecks of modernizing facilities and equipment is that the cost of new machinery is rising and the lifecycle of machinery is becoming shorter. Many facilities of R&D institutes also have become old and are not sufficient for a satisfactory level of testing and R&D functions.

2. TECHNOLOGICAL DEVELOPMENT POLICIES

2.1 SETTING-UP OF TECHNOLOGICAL DEVELOPMENT IN INDONESIA

Due to the retrenchment fiscal policy during the latter half of the 1980s, investments have been sufficiently made in the field of science and technology in Indonesia. Thus, considerable advances in the expansion of R&D institutions and human resource development in this field have not been achieved.

According to "Science and Technology for Industrial Development", the report of the Agency for the Assessment and Application of Technology (BPPT), the ratio of expenditures to R&D, including both the private sector and the public sector, to GDP was approximately 0.2% in 1991 in Indonesia. This is around one tenth that of the U.S.A and Japan, and quite low even compared with NIES such as Korea and Taiwan.

As for agencies related to science and technology, there are: the State Minister for Research and Technology (Menteri Negara Riset dan Teknologi, MENRISTEK) and Secretariat of MENRISTEK (RISTEK); R&D institutions under the Ministries and state owened enterprises; independent agencies under the direct control of the President such as the Indonesian Institute of Science (Lembaga Ilmu dan Pengetahuan Indonesia, LIPI), Agency for the Assessment and Application of Technology (Badan Pengkajian dan Penerapan Teknologi, BPPT), the Agency for National Atomic Energy (Badan Tenaga Atom Nasional, BATAN), the Institute of National Aviation and Space (Lembaga Antariksa dan Penerbangan Nasional, LAPAN), the National Map and Survey Coordination Agency (Badan Koordinasi Survey dan Pemetaan Nasional, BAKOSURTANAL), the Central Statistics Bureau (Buro Pusat Statistik, BPS); and universities.

As for advisory agencies related to science and technology, there are: the Indonesian Science Association (Asosiasi Ilmu Pengetahuan Indonesia, AIPI), for the President; the National Research Council (Dewan Riset Nasional, DRN) for the State Minister for Research and Technology; and the National Standardization Council (Dewn Standardisasi Nasional, DSN). AIPI, established in 1991, gives advice on R&D to government and related institutions.

DRN, established in 1984, coordinates, formulates, monitors, and evaluates major programs on R&D.

Major governmental agencies and institutions which promote industrial technology development are BPPT, the Agency of Strategic Industry Management (Badan Pengelola Industri Strategis, BPIS), a part of LIPI, R&D institutes under the Ministry of Industry and Trade, and major universities.

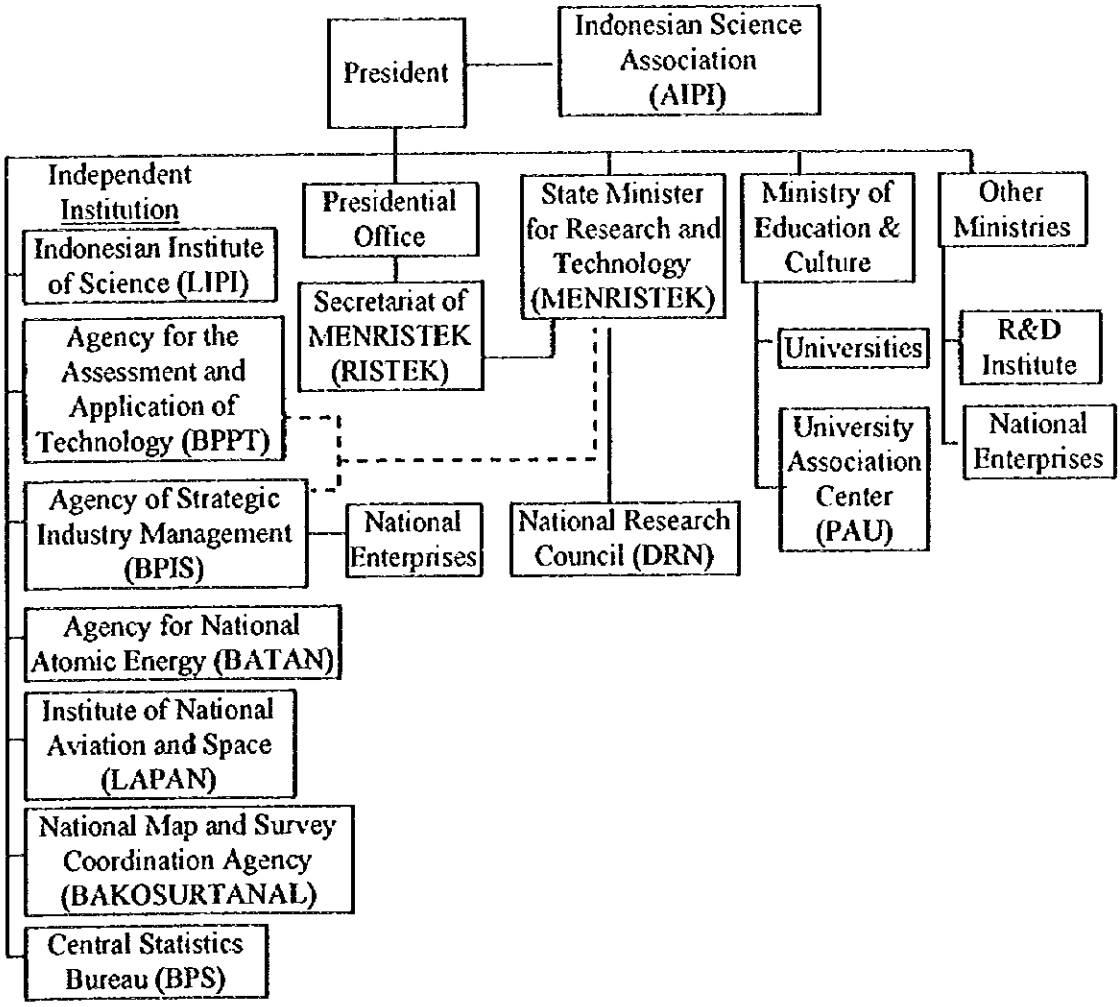
BPPT, established in 1975 by separating it from Pertamina, engages in R&D for the evaluation and application of overseas technologies. The State Minister for Research and Technology serves concurrently as head of BPPT. BPPT plays a key role in science and technology development in Indonesia. BPPT places an emphasis on technologies closely related to industries rather than basic research and covers across-the-board technology fields under the jurisdiction of other ministries and agencies.

LIPI is under the control of the State Minister for Research and Technology. Main R&D activities of LIPI have recently changed focus to industrial technologies development rather than R&D in basic science. LIPI provides various technology services to other ministries and the private sector, and has the function of planning and coordinating industrial standardization.

BPIS administers, protects and promotes 10 state-owned enterprises which are key industries that are strategically important in such fields as airplanes, ship building, arms, etc. The State Minister for Research and Technology serves as head of BPIS.

The Center for the Development of Science and Technology (PUSPIPTEK) was founded in 1978 in Serpong, West Java. The Center houses the Calibration, Instrumentation, Weights and Measures Laboratory operated by LIPI , the Applied Chemical Laboratory operated by LIPI, the Construction Testing Laboratory operated by BPPT, BATAN, the Aero, Gas and Vibration Laboratory operated by BPPT, LAPAN, and so on.

Fig. 3-2-1 Setting-up for Technological Research and Development in Indonesia



Source: *Report on Technological Competitiveness of the Machinery Industry in the East Asian Region*, the Economic Research Institute of Japan Society for the Promotion of Machine Industry, May, 1995

2.2 TECHNOLOGY DEVELOPMENT INSTITUTES UNDER THE MINISTRY OF INDUSTRY AND TRADE

2.2.1 R&D Related Institutes under the Ministry of Industry and Trade

There are the following three types of R&D related institutes under the Ministry of Industry and Trade.

i. Industrial R&D Institutes

Under the former Ministry of Industry. They are specialized in specific sectors. There are 9 institutes in the country.

ii. Regional Industrial R&D Institutes

Under the former Ministry of Industry. They are regional testing institutes. There are 13 institutes in operation and 2 institutes under preparation.

iii. Testing Centers

Under the former Ministry of Trade. They engage in product tests. There are 24 centers in the country.

Major functions of sectoral Industrial R&D Institutes are as follows:

i. R&D activities

- Technologies and skills

  Use of materials, technology application management, modification and innovation of products and processes, manufacture of machinery and equipment, packaging, prevention of industrial waste

- Designing and industrial engineering

  Manufacture of machinery and equipment, system integration for plant construction

- Industrial standardization

  Compiling and application of standards

- Product design

  Batik, handicraft, ceramics, leather products, rubber products, plastic products

- Issues related to industry

  Energy saving, productivity improvement, F/S, optimum utilization of production

facilities

ii. Provision of technical services

- Materials and products testing

  Application of SII/SNI, supervision of exporting products, calibration of testing equipment

- Research and application of outcome of researches

  Technologies and skills, designing and industrial engineering, standardization, product design, issues related to industry

- Quality management and quality improvement through quality assurance systems

  Compulsory or voluntary quality control, quality improvement through improvement in processes, materials, and equipment, quality assurance, inspection and verification of materials and equipment

- Designing and Industrial Engineering

  Manufacture of machinery and equipment, system integration concerning plant construction

- Industrial waste problem

  Manufacture of machinery and equipment, air monitoring, industrial waste testing

- Consultation, provision of information, and education & training in technologies and skills

  Consultation and provision of information concerning material use, manufacturing processes, corrosion prevention, industrial waste prevention, plant construction and expansion, technology processes, machinery and equipment operation, product testing, management education and training

Fig. 3-2-2 Research and Development Institutes under the Ministry of Industry and Trade

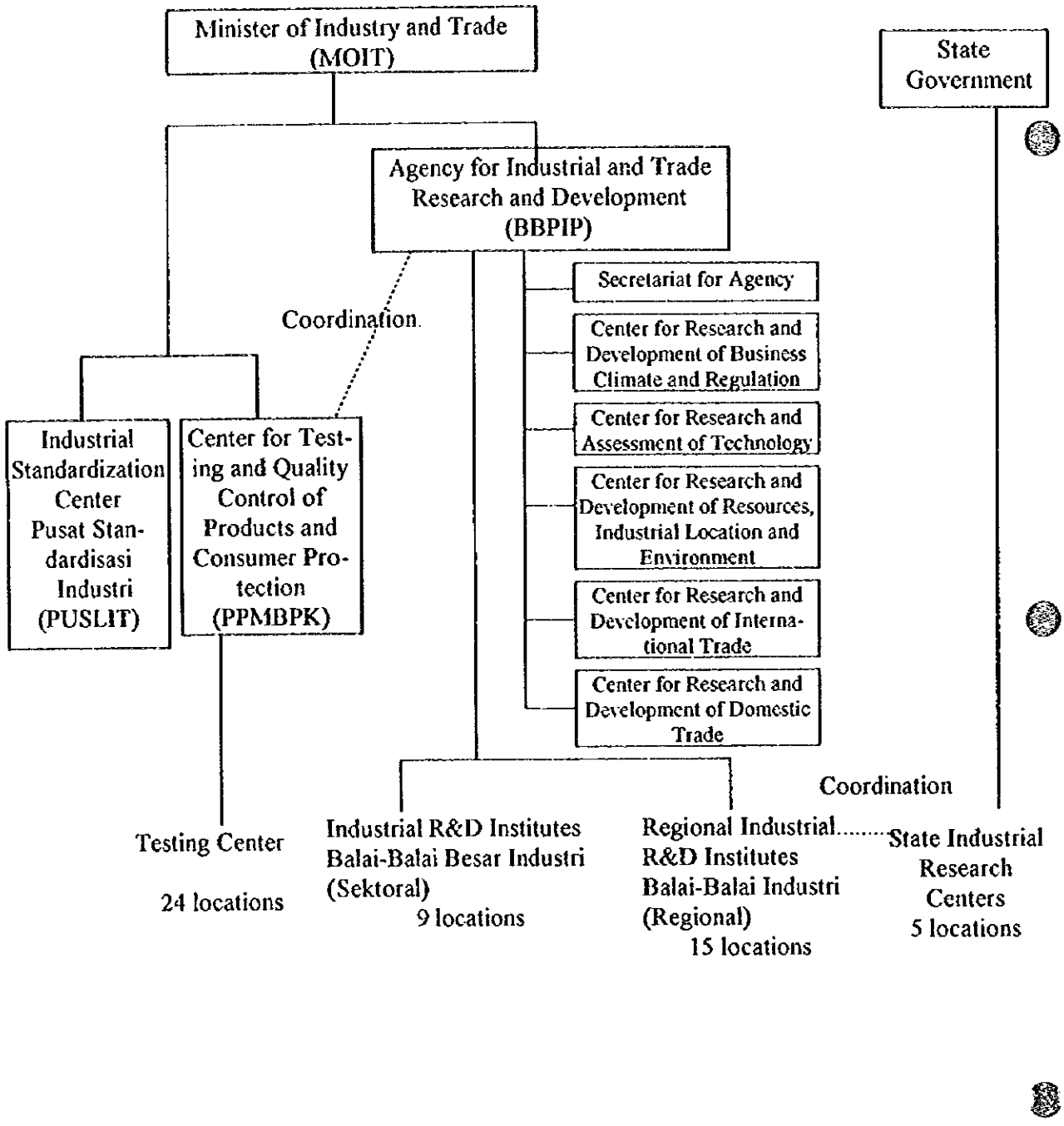


Table 3-2-1 List of Industrial R&D Institutes

Name	Location	Area
1.Balai Besar Penelitian dan Pengembangan Industri Kimia (BBIK)	Jakarta	Chemical
2.Balai Besar Penelitian dan Pengembangan Industri Hasil Pertanian (BBIHP)	Bogor	Agro-industry
3.Balai Besar Pengembangan Industri Logam dan Mesin (BBLM)	Bandung	Metal, Machinery
4.Balai Besar Penelitian dan Pengembangan Industri Tekstil (BBT)	Bandung	Textile
5.Balai Besar Penelitian dan Pengembangan Industril Selulosa (BBS)	Bandung	Cellulose
6.Balai Busar Penelitian dan Pengembangan Industri Bahan dan Barang Teknik (B4T)	Bandung	Engineering, Industrial materials
7.Balai Besar Penelitian dan Pengembangan Industri Keramik (BBK)	Bandung	Ceramic
8.Balai Besar Penelitian dan Pengembangan Industri Barang Kulit, Karet dan Plastik (BBKKP)	Yogyakarta	Leather, Rubber, Plastic
9.Balai Besar Penelitian dan Pengembangan Industri Kerajinan dan Batik (BBKB)	Yogyakarta	Handicraft, Batik

Source: *Profil Kemampuan Balai Besar Penelitaian dan Pengembangan Industri*, Badan Penelitian dan Pengembangan Industri, February, 1995

Table 3-2-2 shows regional R&D institutes. Two regional R&D institutes in Jayapura and Pakan Baru are under preparation.

The following projects are on-going or under preparation as regards the expansion of regional R&D institutes.

i. The Industrial Technology and Human Resources Development Project, approved in March, 1996, by the Asian Development Bank, covers the expansion of Ambon Industrial R&D Institute, as well as 7 sectral Industrial R&D Institutes. The expansion of the Ambon Industrial R&D Institute was started in June, 1996, with the purpose of upgrading marine products processing technologies including product and wastes testing. Processed marine products of Ambon are considered to have export potential. This project pursued the promotion of the marine products processing industry in this region.

ii. Under a project financed by the World Bank, the Semarang Industrial R&D Institute is

to be upgraded in the fields of environment and metal testing. Small scale industries, especially foundries, are concentrated in Central Java. This project aims at the promotion of these industries.

iii. The Medan Industrial R&D Institute is being upgraded in the fields of environment and metal testing with the collaboration of GTZ, Germany.

iv. Other priority areas for upgrading are regional R&D institutes in Palembang and Padang. The purpose of upgrading will be the promotion of small scale industries which supply parts to large scale agro-industry for the former, and the promotion of small scale industries through the development of large scale state-owned enterprises.

Table 3-2-2 List of Regional Industrial R&D Institutes

Name	Location	Area
Balai Penelitian dan Pengembangan Industri Banda Aceh (BIBA)	Banda Aceh	Agriculture, Agro-industry
Balai Penelitian dan Pengembangan Industri Medan (BIMD)	Medan	Chemical, Metal, Machinery, Palm oil, Textile
Balai Penelitian dan Pengembangan Industri Palembang (BIPA)	Palembang	Agro-industry, Household industry, Chemical, Electronics
Balai Penelitian dan Pengembangan Industri Semarang (BISM)	Semarang	Environment, Agro-industry, Textile, Machinery
Balai Penelitian dan Pengembangan Industri Surabaya (BISB)	Surabaya	Non-ferrous metal, Foodstuff, Textile, Handicraft
Balai Penelitian dan Pengembangan Industri Banjar Baru (BIBB)	Banjar Baru	Wood, Rattan, Agro-industry
Balai Penelitian dan Pengembangan Industri Ujung Pandang (BIUP)	Ujung Pandang	Agro-industry, Marine products Processing, Construction materials
Balai Penelitian dan Pengembangan Industri Manado (BIMN)	Manado	Agro-industry, Marine products processing, Construction materials, Palm processing
Balai Penelitian dan Pengembangan Industri Ambon (BIAM)	Ambon	Marine Products Processing, Wood processing
Balai Penelitian dan Pengembangan Industri Tanjung Karang (BITK)	Tanjung Karang	Agro-industry, Handicraft
Balai Penelitian dan Pengembangan Industri Padang (BIPD)	Padang	Agro-industry, Forestry, Mining, Marine Products Processing, Environment
Balai Penelitian dan Pengembangan Industri Pontianak (BIPO)	Pontianak	Fruits, Foodstuff, Beverage
Balai Penelitian dan Pengembangan Industri Samarinda	Samarinda	Foodstuff, Handicraft
Balai Penelitian dan Pengembangan Industri Jayapura	Jayapura	Under development
Balai Penelitian dan Pengembangan Industri Pakan Baru	Pakan Baru	Under development

Source: *Profil Kemampuan Balai Besar Penelitaian dan Pengembangan Industri*, Badan Penelitian dan Pengembangan Industri, February, 1995

State-owned industrial research centers are shown in Table 3-2-3.

Table 3-2-3 List of State Owned Industrial Research Centers

Name	Location
1. Jakarta Textile Research Center Balai Penelitian Tekstil Jakarta (BTJ)	Jakarta
2. Jakarta Building Materials Research Center Balai Penelitian Bahan Bangunan Jakarta (BBBJ)	Jakarta
3. Jakarta Handicraft Research Center Balai Penelitian Kerajinan Jakarta (BKJ)	Jakarta
4. Medan Textile Research Center Balai Penelitian Tekastil Medan (BTMD)	Medan
5. Medan Metal Research Center Balai Penelitian Logam Medan (BLMD)	Medan

Source: *Profil Kemampuan Balai Besar Penelitaian dan Pengembangan Industri*, Badan Penelitian dan Pengembangan Industri, February, 1995

2.3 STANDARDIZATION

2.3.1 Organization for Standardization

The Standardization Council of Indonesia (Dewan Standardisasi Nasional, DSN) is in charge of the nation-level coordination of standardization in Indonesia. The National Standardization System (Sistem Standar Nasional, SSN) is managed on the basis of the National Standard of Indonesia (Standar Nasional Indonesia, SNI).

As for the process of formulating standards, a draft of standards is prepared by an individual technical committee, organized by various technical organizations responsible for the formulation of standards. The proposed draft must receive the approval of DSN. The Institute for Standardization (LIPI-PUSTAN) in the LIPI functions as a secretariat of DSN.

Various ministries and institutions which participate in SSN are responsible for the formulation and implementation of SNI. As for industrial standards, PUSTAN in the Ministry of Industry and Trade is an executing agency of the standardization. The role of the Ministry of Industry and Trade is important in SSN. The former Ministry of Industry administered more than 70% of SNI. For the formulation of standards, an industrial R&D institute or a regional R&D institute under the Ministry of Industry and Trade prepares a draft, and a technical committee formed by PUSTAN discusses the draft and submits it to DSN.

PUSTAN organizes special committees for standardization by type of industry as follows:

Machinery, Shipbuilding & offshore construction, Automobiles, Textiles, Electrical, Electronic, Agrochemical, Metallic materials & products, Food & beverages, Rubber, Leather & plastic, Chemicals, Sports, Office & school equipment, Pulp & paper, Packaging, and Non-metallic building.

2.3.2 Certification System

The SNI mark can be applied according to the following process.

i. A company manufacturing a product which satisfies SNI receives a certificate from a

quality system certification body for the capability of manufacturing continuously and stably in accordance with SNI.

ii. The company receives a certificate that the product satisfies SNI from a testing laboratory.

iii. The company applies to a product certification body with these certificates.

iv. After receiving a certification of SNI mark, the company can put the SNI mark on the product.

Table 3-2-4 Number of SNI by Classification

Classification	Number of SNI*
1. Agricultural and food products	260
2. Material and implements used in agriculture	96
3. Building and construction	227
4. Electrotechnical engineering	227
5. Mechanical engineering	449
6. Chemical engineering	486
7. Metals	250
8. Textiles	222
9. Automotive engineering	144
10. Shipbuilding	186
11. Railway engineering	11
12. Domestic wares	116
13. Mining	0
14. Pulp and papers	114
15. Ceramics	118
16. Medicine and medical equipment	24
17. Medicine, cosmetic and medicine equipment	0
18. Energy and radio activity	12
19. Basic standards and miscellaneous	173
Total	3,115

Note: * As of February 28, 1994

Source: *Study on Master Plan of Industrial Standardization and Promotion of Quality Control in Indonesia*, JICA, 1995

3. FINANCIAL SYSTEMS

3.1 PRESENT SITUATION OF FINANCIAL SYSTEMS

3.1.1 Banks

(1) Bank Policies

Deregulation in the banking business in Indonesia started in 1983 when the interest rate of deposits and the lending of State Banks was liberated, the regulation on the lending limit was eliminated, and the taxation on the interest of foreign currency deposits was also eliminated.

In October, 1988, PAKTO 88, which was the comprehensive deregulation policy package for financial and banking sectors, was introduced. In PAKTO 88, the establishment of joint venture banks between foreign and Indonesian private banks, which had been banned for the previous 20 years, was approved and the setting-up of new branches of the existing foreign banks in six big cities other than Jakarta was also permitted.

In March, 1989, the restriction on the borrowing of offshore money by the banks was eased and consequently, the number of private commercial banks started to increase sharply. There were only 63 private commercial banks at the end of 1988 but that number increased to 206 banks at the end of March, 1995. However, many of them, except for the top 15 banks, are relatively small in volume of assets and scale of operation and their management bases are rather fragile.

On the other hand, the control of the central bank, Bank Indonesia, over other banks was strengthened in February, 1991, by introducing the requirement of a higher ratio of capital in compliance with BIS regulations, the restriction on the amount of lending and the foreign currencies position, the regulation of maintaining a sound banking management system, and the obligation of compulsory reporting from banks to Central Bank.

In March, 1992, the New Bank Law was enacted and all the banks in Indonesia were classified into only two categories of Commercial Banks and Rural Credit Banks. At the same time, five State Commercial Banks, a State Development Bank and a State Savings Bank became State Commercial Banks after they were converted to stock companies. Under the new law, the license system of the Minister of Finance regarding the set-up of new banks was maintained, the conditions for setting-up new banks was made clear and the controlling right of Central Bank to maintain the soundness in bank management was also clearly stated.

In the Decree of October, 1992, the rise in the minimum paid-up capital and the restrictions on the qualifications for bank directors were implemented. It was also approved for foreign banks to own up to 49% of private commercial banks' shares and less than 25% of state commercial banks' shares.

Bank policies in Indonesia, thus, have been repeatedly deregulated and intensified but, as a whole, the direction has been one of deregulation. Nevertheless, it is true that there are many problems concerning the soundness of banks themselves and the banking system of Indonesia such as the big loss caused by the foreign exchange speculation made by a private commercial bank in 1990, the liquidation of Bank Sumatra in 1992, the trouble of a large problem loan caused by a state commercial bank in 1993 and the appearance in succession of problem loans in recent days. In order to make the banking system of Indonesia serve to promote economic development, the improvement of bank management and the restoration of the soundness of the banking system are now being sought through the initiative of Central Bank.

While Central Bank is asking other banks to strengthen their internal audit systems and to be consistent with the thorough implementation of them, it assigned greater powers to The State Bank Supervision Team and The Special Task Forces at commercial banks. For those banks which may be slow to solve their problems or which have failed to undergo immediate overhaul or gradual remedial action, Central Bank may advise a bank to undergo a merger, consolidation or takeover by new investors.

To face intense competition due to financial globalization as well as increases in funding alternatives offered by non-bank financial institutions, many efforts were made aiming at increasing the capacity of banks in 1995/96. Central Bank has imposed stricter criteria for establishing new banks, has raised the capital requirement of foreign exchange banks, and has been persuading banks to merge and/or consolidate.

(2) Number of Banks and Bank Offices

There were 240 commercial banks and 9,278 rural credit banks in Indonesia at the end of March, 1996, and the details were as follows:

Table 3-3-1 Number of Banks and Bank Offices in Indonesia

Type of Banks	Number of Banks	Number of Offices
Commercial Banks		
State commercial banks	7	1,639
Local government-owned banks	27	706
Private national foreign exchange banks	77	3,433
Private national non-foreign exchange banks	88	818
Joint banks	31	52
Foreign banks	10	102
(Sub-total)	(240)	(6,750)
Rural Credit Banks	(9,278)	

Source: *Report For The Financial Year 1995/96*, Bank Indonesia, 1996

First, the rapid expansion of commercial bank networks must be pointed out. Comparing the number of offices at the end of 1992 and the end of March, 1996, commercial banks increased their offices by 21% and rural credit banks only by 5%. Private commercial bank offices increased by 24.7% during same period, far exceeding the 14.6% increase of state commercial bank offices. There were 483 rural credit banks newly established in the past 3 years whereas only 20 new commercial banks have been established in the same period. However, most of the rural credit banks are small scale organizations and only commercial banks which operate on a rather larger scale can afford a rapid ex-

pansion of services by setting up offices at faster speed.

Secondly, the remarkable concentration of bank offices in Jawa Island is also an important phenomenon. 71.6% of all bank offices were located in the island at the end of March, 1996. 46.2% of all commercial bank offices were located in Jakarta and West Jawa and, in the case of private commercial banks, the ratio jumps up to 53.1% as 2,259 offices out of the total of 4,251 offices were situated in the said area. For state commercial banks and local government banks, 31.2% or 732 offices out of a total of 2,345 were in the area. Only 4.8% of all bank offices were in Bali, 4.2% in North Sumatra and 2.5% in South Sulawesi.

3.1.2 Capital Market

(1) Stock Market

The stock market in Indonesia, which was closed in 1958, was reopened at Jakarta in 1977 following the Presidential Decree issued in 1976. Before the reopening of the market, the Capital Market Supervisory Agency (BAPERAM) was set up in December, 1976. As the deregulation policies for the stock market were disclosed in October, 1987 and 1988, the number of listed companies started to increase from 1990, as there were only 24 until 1987. In 1988, the Surabaya Stock Exchange Market (SSE) was also opened as a privately operated organization.

The major deregulation measures for the stock exchange market implemented around 1988 were as follows:

i. Liberalization of foreign ownership up to 49% shares of listed companies
ii. The easing of qualifications for listing and simplification of listing procedures
iii The opening of an Over-The-Counter Market (OTC Market)
iv. Removal of the daily price fluctuation limit (4%)

At the same time, a separate 15% withholding tax was introduced on bank interest, in

order to attract funds into the stock market and to make it more active.

The Jakarta Stock Exchange Market (JSX) hit a peak in August, 1990 and then the average share price started to decline. To improve the situation, the division of responsibilities for supervision and operation of stock trading was clarified and the screening standard for stock broker licenses was revised in the stock market policies disclosed in November, 1990.

In December, 1991, JSX was privatized and the stock trade operation business was transferred to JSX from BAPERAM in April, 1992. Pefindo, a rating organization, was set up by BAPERAM and Bank Indonesia in December, 1993 and Pefindo had already announced the rating of 2 companies by the end of March, 1995. KDEI (a central settlement organization) also started its operation partially from February, 1994.

The consolidation of the SSE and OTC markets is now being examined to make the stock market more active and to bring it up to the level of JSX and other international capital markets.

In November, 1995, Act No.8 of 1995 On The Capital Market was passed by the Government to provide legal foundation for future development of the capital market. After this Act was established, the Government encouraged the establishment of mutual fund to raise the local investor base and admitted 100% foreign ownership in those mutual funds companies. Furthermore, maximum foreign ownership in securities companies were raised to 85%. In the last fiscal year, various measures to protect investors and to secure the transparency of the stock market has been introduced.

(2) Bond Market

The Indonesian bond market started when the Road Corporation issued bonds in 1983 and this was followed by a series of flotations of bonds by state commercial banks, governmental financial institutions, rural development banks and major private companies. No national bonds have been floated so far in Indonesia.

The details of bonds issued by governmental institutions, local government and major companies are as follows:

Underwriting method :	By syndicate of stock trading companies
Issuance method :	Normally 5 year bonds with interest or float-interest
Sales Restriction :	None
Bond face :	Unregistered

3.1.3 Finance Companies

Leasing, factoring, consumer financing, venture capital, and credit card companies are included in this category and there were 254 companies at the end of 1995. Among these companies, 198 were national private companies, 2 state-owned companies and 54 joint venture companies. Approximately 60 companies conducted single financing business and the others engaged in multi-financing activities, with the most business in leasing.

Finance companies raised their funds by equity financing, borrowing, bond flotation and/or loans from foreign partners. In 1995, the total capital of financing companies went up to Rp 4.3 trillion which was a 23.8% increase over the previous year, while borrowing, comprising domestic and offshore, increased by 56.6% to Rp 19.7 trillion. 57% of borrowed amount were generated domestically. The total assets of financing companies amounted to Rp 23.4 trillion and the net investment was Rp 18 trillion at the end of 1995.

3.1.4 Insurance Companies

There were 155 insurance or reinsurance companies in Indonesia in August, 1995, among which 96 were in general insurance, 50 in life insurance, 5 in social insurance and 4 in reinsurance. In addition, there were 73 insurance brokers, 21 adjusters and 18 actuarial consultants. By ownership, 28 were joint ventures of which 16 were in indemnity insurance and the remaining 12 were in life insurance.

At the end of 1994, gross premiums were Rp. 5.9 trillion, which were equal to 1.5% of GDP, and the total assets of insurance companies were Rp. 14.4 trillion. About 45% of that amount, namely Rp. 6.5 trillion, were owned by social insurance companies.

3.1.5 Pension Funds and Pawnshops

To give a sound and strong base to pension funds, the Indonesian government introduced a series of regulations in February, 1995, by decree of the Minister of Finance. Starting in 1995, pension fund managers are required to submit financial and portfolio reports, after being audited by separate public accountants, to the Government. For employer-managed pension funds, it is necessary to provide better assurance of benefits for members and to ensure the continuity of fixed benefit pension schemes. Investment by founders of pension funds also became subject to the governmental regulations. Pension funds are permitted to invest in stocks and promissory notes with less than one-year maturity with the limit of a maximum of 20% of the total portfolio. Land and building investments have to be under 15% of the total and investments in any single party may not exceed 10% with the exception of pension funds in remote places.

521 applications for reestablishing pension funds in compliance with the new 1992 Act had been received by December, 1994. 508 were employer-managed and 13 were independent pension funds. 417 funds were by private companies and 104 were by state-owned enterprises. Among them, 141 of the employer-managed pension funds and 16 of the financial institution pension funds were approved.

According to financial reports submitted to the Government by pension funds, Rp 8.2 trillion was invested in 1994. The investment to time deposits was the biggest and it was nearly 74% of total pension fund assets.

In Indonesia, state pawnshops provide the opportunities for low income people to get loans. The state pawnshops were legally reincorporated as public corporations and, besides pawning, provide other services such as jewelry appraisal and custodian services of valuables.

There were 4.76 million customers at 582 shops in 1995 and leases totaling Rp. 1.4 trillion were given to them. Outstanding loan amounts at the end of 1995 were Rp. 332 billion. The maximum borrowing ceiling in 1995 was Rp. 20 million per case and the interest rates run from 2.5% per month to 3.5%, depending on the loan amount.

The governmental target on the development of state pawnshops in the next 5 years is to increase the number of customers by improving the availability of new branch offices in the areas which are not likely to be served by other financial institutions, to raise the loan ceiling in stages, and to realize the growth of loans extended at an annual average rate of 20%.

3.2 PRESENT SITUATION OF FINANCIAL POLICIES

3.2.1 General Financial Policies

The basic financial policy in Indonesia is a tight money policy to prevent inflation. To pursue economic development while controlling inflation, the most important subject is how to make the domestic economy more efficient. Toward this end, the Government has been implementing various reforms of financial systems and measures to expand the financial market, as shown in "3.1 PRESENT SITUATION OF FINANCIAL SYSTEMS" of this chapter.

The control of the money supply in order to prevent inflation is done by controlling the discount rates for Bank Indonesia Certificates (SBIs). Bank Indonesia tries to adjust the SBI rates with the aim of maintaining a reasonable differential between domestic rates and offshore rates. If the domestic rates rise too rapidly, it would discourage investment and attract excessive inflows of short term speculative capital, although it would be effective in stemming domestic demand. If they become too low, it would generate excessive domestic demand and cause capital outflow.

Central Bank has also been trying to attain the sensitive control of the money supply by guiding banks not to make excessive loans to high-risk areas such as construction or housing.

One of the main reasons for the abolition of liquidity credit in 1990, except for three limited areas, was as a counter-measure to curb the increase of the money supply, as there was a sharp increase in liquidity credit performances and it was causing a rapid increase of inflow of fresh money. Although there were many cases in which the low interest capital of liquidity credit in the higher interest time deposit or stock market was employed and the Government tried to lessen the financial burden caused by a rapid increase of low interest liquidity credit of Central Bank, preventing high inflation which might have happened from a sharp increase of fresh money through liquidity credit was a major reason for the abolition.

3.2.2 Financial Policies for Small Scale Enterprises (SSEs)

Indonesia started financial assistance for SSEs through a "Selective Credit Policy" and there were various liquidity credit schemes in the past which SSEs could utilize at favorable terms.

Among those liquidity credit schemes, there were KI and KMK for medium scale enterprises, which could be used for equipment investment and working capital, respectively. For small scale enterprises, there were KIK for an equipment investment, KMKP for a working capital and KUPEDES for the development of manufacturing industries by small scale rural enterprises, which had been sponsored by the World Bank. Nevertheless, those liquidity credit schemes were abolished by the financial policies declared in January, 1990 (Pakjan 90) and new applications for those types of liquidity credit were suspended. Nowadays, there is no liquidity credit facility for SSEs except for a few cases.

Other main aims of the introduction of Pakjan 90, besides the view to prevent inflation by controlling fresh money, were to stop the dependency of the banks on the low interest capital of liquidity credit and to encourage the banks to mobilize public funds. Also they wanted to correct the false and fraudulent manner of the banks ignoring the selective and fair procedures of making loans, which had resulted in a sharp increase in applications for low interest loans.

Since Pakjan 90, credit schemes for SSEs have basically been divided into two categories: Small Scale Business Credit (KUK) financed by banks' own funds and cooperative credits supported by Central Bank's liquidity credit.

Pakjan 90 requires all the banks to allocate 20% of their credit portfolio to finance SSEs. This is the scheme called KUK. In the KUK scheme, a loan up to a maximum of Rp 250 million per borrower is available for an enterprise with total assets (but excluding land and buildings) of Rp 600 million or less.

The liquidity credits for cooperatives are: a) for farmers to finance food production, b) for cooperatives to finance food procurement, and c) for cooperative members to finance any

productive activities in all economic sectors (maximum Rp 50 million per member).

Recently, another loan scheme for SSEs which is called "1-5% Loan" has been introduced. In this scheme, all state-owned companies have to make available 1-5% of their profit for the loans directed to SSEs. An SSE will apply for a loan directly to a state-owned company and a state-owned company which receives the application from an SSE would assess the application and decide whether they will grant the loan or not. The. implementation of this loan scheme would be monitored by the Ministry of Finance. The ceiling amount of loans is Rp 50 million and the interest rates are between 4 and 6% p.a. at the moment.

PT. ASKRINDO is a credit guarantee company which was established in 1971 by the Ministry of Finance and Bank Indonesia aiming to promote the financing to SSEs. When there were liquidity credits available for general SSEs, ASKRINDO provided automatically a guarantee of up to 70% of the loan amount in some cases. Under the present scheme of KUK, the guarantee of ASKRINDO is not made automatically and the availability of their guarantee is decided upon their own assessment of the case.

As a promoter of SSE business, PT BAHANA was established in 1973 by the Ministry of Finance and Bank Indonesia. It has been making capital investment, financing and management consultation mainly to Indonesian national SSEs. From 1996, PT BAHANA is going to make capital investment into SSEs as a venture capital source by utilizing a two-step loan of US$ 200 million from EXIM Bank of Japan.

3.3 PRESENT SITUATION AND PROBLEM OF FINANCING

3.3.1 General Situation and Problem of Financing

In Indonesia, there is always a shortage of funds, a result of the tight-money policy of Central Bank to prevent inflation. Consequently, the ratio of offshore funds in private borrowings tends to be high. On the other hand, Central Bank's policy is to gradually lower the exchange rate of the rupiah against other hard currencies (about 5% p.a. in recent years). These are the main factors pushing up the interest rate of the rupiah and the end-user rate of lending interest remains recently at around 19.3% p.a. for running capital and 16.4% p.a. for investment credit.

Due to the inflationary tendency of the economy, the control of the discount rate of SBI had to be rather unstable and the discount rate of SBI fluctuated from 6.9% at the beginning of fiscal year 1994/95 to 12.3% at the financial year end. Affected by this, the end-user rate of lending interest is unstable as well.

This is also the reason for the unstable interest rate of deposits. Since the interest rate fluctuates considerably, the period of time deposits tends to be shorter to be on the safer side. Most of the time deposits, which have a 57.4% share of bank deposits, seem to be for less than one year. This is also proven by looking at the deposit interest rate. In the fourth quarter of 1995/96, the interest rates of time deposits in rupiah were 17.15% for one-month, 17.29% for three-months, 16.88% for six-months, 16.68% for one-year and 15.39% for two-years. Those in foreign currencies were 6.83% for one-month, 7.88% for three-months, 8.72% for six-months and 7.75% for one-year. Because bank funds depend heavily on short term money, bank lending also tends to be for the short term and there appears to be a serious shortage of middle- to long-term capital necessary for investment in developing the manufacturing industries.

Another problem of financing in Indonesia is that there have been many private commercial banks newly set up in the process of the deregulation of the monetary and financial systems but many of them still remain on a rather small scale and have not established yet a solid

financial base to be able to provide middle- to long-term funds for the manufacturing industries.

3.3.2 Present Situation of Bank Financing

(1) Funds Position

The total funds of all commercial banks in Indonesian at the end of March, 1996 was Rp 329 trillion, an increase of 10.2%, or Rp 30.4 trillion, compared to the previous year.

As for the positioning of the total deposits of Rp 223.7 trillion, 57.4% were in time deposits, 22.9% in savings deposits, and 19.7% in demand deposits. Deposits in rupiah were 79% and 21% were in foreign currencies.

In the financial year of 1995, time deposits in rupiah showed the highest growth of 38.5% over the previous year but foreign currency deposits grew more moderately by 17.3%. The higher interest rate for deposits in rupiah seems to have brought about this phenomenon. Although demand deposits grew by 24.6% as a whole, demand deposits in foreign currency grew by 33.8% whereas those in rupiah showed 22% growth. Central Bank analyzed that the reason for this was the demand for dealings in rupiah increased because the public confidence in the Indonesian currency had been improved.

97.7% of deposit owners were residents in the said year and, among them, 53.3% were individuals and 18.1% were private companies. This shows that personal income has increased and that corporate profitability has improved through the year.

(2) Lending Situation

The outstanding lending amount of all the banks at the end of March, 1996, was Rp 242.4 trillion, which was 23.6% higher than a year before, and the lending amount by private banks grew by 28.2% during the year, taking a share of 48% in all lending by banks.

The purpose of lending was as follows:

Table 3-3-2 Bank Lending by Purpose

Lending Purpose	Share (%)	Changes (%)
Working capital	64.2%	23.0%
Investment	25.6%	22.2%
Consumer	10.2%	31.5%

Source: *Report For The Financial Year 1995/96*, Bank Indonesia, 1996

Working capital credits account for 64.2% of the total, investment credits for 25.6%, and consumer credits only for 10.2%. Although consumer credit which had shown a sharp 56.3% rise in the year of 94/95 suffered from Central Bank's policies aiming to restrain the lending for the high risk areas or consumption stimulating areas, that is, real estate or consumer credit, it still showed a high growth of 31.5% over the last year. Among working capital, export credit grew 20.8%. Especially, joint venture banks and foreign banks are aggressive in this field and export credit held a 48.4% share in the lending amount in these banks.

Looking at the lending by economic sector, 30.1% was for manufacturing, a rise of 16% over the last year. There was a sharp increase in lending for textile, apparel and leather industries in the year of 95/96. The trading sector, with a 23.2% share of all lending, was up by 24% over the previous year and the lending for the local trading sector showed considerable growth. In the service sector, with a 28.7% share in lending, 32.6% growth was recorded in 95/96 because lending to the real estate industry grew by 39.5%.

3.3.3 Present Situation of Capital Market

(1) Stock Market

The number of companies listed at JSX at the end of March, 1996 was 248, 15 companies more than the year before.

Transaction volume and value at the JSX, SSE and OTC markets were as follows:

Table 3-3-3 Stock Transactions at the JSX, the SSE and Over The Counter (in 1995/96)

	Volume (billion Stocks)	Amount (trillion Rp)
JSX	13.2	40.5
SSE	1.4	3.4
OTC	included in SSE	included in SSE

Source: *Report For The Financial Year 1995/96*, Bank Indonesia, 1996

Transaction volume and amount in JSX during the period from April, 1995 to March, 1996, has grown by 116.4% and 67.3% compared to the previous year. The sharp rise in transaction volume was partly because 15 companies were newly listed on the market. The transaction amount showed a big increase because the stock price index suddenly turned upward during the period. At the end of March, 1995, the stock price index at JSX was 428.6 but went up to 492.3 in the first quarter, to 493.2 in the second quarter, to 513.8 in the third quarter and finally to 585.7 in the fourth quarter of 1995/96, which was very close to the record high of 592 marked in January, 1994.

The market capitalization amount at the end of March, 1996 was Rp 175.2 trillion, representing growth of 77.3% compared to the Rp 98.8 trillion of the year before. It was equal to 72.3% of the total outstanding lending amount (Rp 242.2 trillion) of commercial banks on the same date and it has to be pointed out that the stock market is increasing its role as one of the main providers of long-term funds.

SSE's transaction volume was 1.4 billion shares, 27% up from the year before, and the transaction amount decreased by 17% to Rp 3.4 trillion.

(2) Bond Market

By the end of March 1996, 50 companies were listed as bond issuers at JSX, SSE and OTC, an increase of 4 companies. The total bond capitalization amounted to Rp 8.7 trillion at the end of March, which was 22.5% up from the last year. However, many of

the bonds issued tended to be purchased and held by institutional investors and hence bond trading in the secondary market was not very active.

3.4 PRESENT SITUATION AND PROBLEM OF FINANCING FOR SUPPORTING INDUSTRIES

3.4.1 Present Situation of Small-Scale Business Credit (Kredit Usaha Kecil - KUK)

The KUK scheme was introduced when most of the major liquidity credit schemes for SSEs had been abolished in the comprehensive monetary and financial policies in 1990 (Pakjan 90), aiming to secure financing to SSEs by banks utilizing their own funds. In May 1993, when other financial deregulation policies (Pakmei 93) were introduced, the KUK scheme was also revised.

The outline of the KUK scheme is as follows:

Credit Funds : Making a minimum of 20% of the credit portfolio of all banks available for financing SSEs conformable to the definition below

SSE : Small-Scale Enterprises with total assets of Rp 600 million or below excluding land and buildings

Credit Limit : Maximum Rp 250 million per borrower

The lending record of KUK at the end of June, 1995 is as follows:

Total Lending Amount :	Rp 37.6 Trillion	
Ratio of Lending :		
(by credit ceiling)	Below Rp 25 million	45.2%
	Rp 25 - below 100 million	25.3%
	Rp 100 - 250 million	29.5%
(by economic sector)	Trade sector	35.4% (Rp. 13.3 trillion)
	Services sector	17.2% (Rp. 6.5 trillion)
	Industrial sector	8.8% (Rp. 3.3 trillion)
Average Lending Amount :	Rp 6.2 million per borrower	

At the end of 1996, the amount lent under the KUK scheme increased to Rp 42.1 trillion, a growth of 19.3% compared to the previous year. Among 6.7 million loans, 97% are to clients whose credit ceilings are below Rp 50 million.

3.4.2 Problems of KUK

Although the credit amount of KUK has been growing by 20% p.a. from December, 1989, to June, 1995, there are still some problems.

On the borrowers side, it has been pointed out very often that they were not able to provide a feasible project and were lacking ability in marketing, production and management. On the other hand, the lenders side points out the constraints such as high costs, difficulties in finding feasible projects, high risks and limited branch office networks of banks.

According to a booklet, "The Banking Role In Small-Scale Enterprise Development," published by the Cooperative and Small-Scale Credit Department of Central Bank in 1995, the development funds for SSEs must not rely on Governmental funds or liquidity credit of Central Bank which may cause inflation nor on offshore funds which have to be regarded only as a supplementary source. It says the necessary funds for developing SSEs must be supplied through sustainable credit systems based on the market mechanism, by linking SSEs and banks.

It also points out that, in order to link SSEs and banks more closely, it is necessary to work out the constraints of SSEs and banks such as those mentioned above and for that purpose, the Government and Central Bank have to provide technical assistance for them in non-financial areas.

3.4.3 Policies for Promoting Small and Medium-Scale Business Credit

(1) Legislation of Medium Scale Business Act

Although the Small Scale Business Act, the first one in its kind in Indonesia, was formulated around the end of 1995 to provide a clear legal basis for SSE development, a similar legal basis has not been provided for Medium Scale Enterprises (MSE).. Many of the enterprises belonging to supporting industries are not included in SSE but MSE and a solid legal basis has to be provided for policies enabling their faster development which is

badly needed by many of the assembling industries in Indonesia.

(2) Small Enterprise Development Project (SEDP/PPUK)

This project started in 1978 aiming to increase the eligibility of small businesses, to improve the capability of bank staff in appraising small credit and consequently to improve SSEs' access to credit. PPUK, Regional Project Management Unit, which was established in 1978, is located in 14 Bank Indonesia branches and works not only with the banks but also with LEDUs (Local Enterprise Development Units). PPUK's activities are:

i. conducting surveys to identify potential investment opportunities
ii. conducting training and consultation for credit officers of banks, LEDU staff and small scale enterprises
iii. formulating group lending projects for financing by banks

By the end of 1995, PPUK had found 4,022 projects which had potential for getting finance under the KUK scheme and Rp 894.7 billion loans had been granted for 1,629 projects. By the end of March, 1955, PPUK gave training to 2,788 credit officers of banks and 5,700 LEDU staff.

(3) Linking Bank and Self-Help Group Project (PHBK)

The Linking Bank And Self-Help Group Project is a joint project of Indonesia and the Republic of Germany and started in 1987 under the management of Bank Indonesia. The activities of PHBK are:

i. identifying banks, Self-Help Promoting Institutions and micro business groups which have savings and loan functions that could fulfill certain eligibility criteria
ii. providing training to bank staff regarding the linkage between banks and savings and loan groups
iii. giving training to Self-Help Promoting Institute staff on the linkage between banks

and the management of the groups

iv. offering consultation to the staff of banks and the Self-Help involved group on how to support the linkage

By June 1995, PHBK had succeeded in linking 2,516 Self-Help Groups with 103,500 members with 163 banks. Total credit lent was Rp 21.9 billion and members have realized savings of Rp 3.9 billion.

3.4.4 Constraints in Financing for Development of Supporting Industries

As described before, KUK has been showing a rapid increase and, it can be said that, to certain extent, the sincere attempt of the Government to promote KUK has been successful. Since funding for KUK is not fresh money, the policy objective of maintaining the tight money policy while promoting KUK seems to be being attained at the same time.

Nevertheless, examining the situation of KUK more closely, the present scheme is not necessarily effective for developing supporting industries which serve the manufacturing industries.

In the first place, for an enterprise to be eligible for KUK, it can not have total assets of more than Rp 600 million. This amount is equal to only US$300,000.- which is not a sufficient amount as business capital in the field of manufacturing. If a company has assets of more than Rp 600 million, it is considered as a big enterprise and has to seek business funds in situations with no favorable credit scheme. This could be a big obstacle for a company with assets of only a little more than Rp 600 million but still with only very small scale operations due to the lack of funds to grow further.

The same thing can be pointed out about the credit ceiling. The maximum credit line of KUK is Rp 250 million which is equal to only US$125,000.-. In the field of supporting industries, there has been more and more demand for high-productivity and high-accuracy machinery and equipment. The ceiling amount set under the KUK scheme does not seem to be high enough for such facilities to be obtained.

Since the KUK funds have to be allocated from a bank's own funds, the money lent under the KUK scheme is inevitably affected by the Indonesian financial constraints; that is, the amount of much middle- to long-term funds is not very high. On this point as well, KUK is not necessarily an adequate credit scheme for the manufacturing industries which require longer-term funds. This may be a reason for the fact that more than half of KUK funding went to trading and services fields.

Finance for the supporting industries tends to be bigger in amount and longer in credit terms than the KUK scheme expects. Also, it would be helpful of interest rates were lower. Therefore, under the present situation of financial policies and financial practices in Indonesia, it may be a very difficult area for gains to be realized unless the basic framework of financial policy is modified or exceptional measures are taken.

While supporting the basic principle of monetary policy as not tending to increase the money supply, it may be possible to consider the following counter-measures for improvement:

- Modifying the qualification for the KUK scheme to make it applicable to those companies in the manufacturing sector and making it possible for medium-scale enterprises in supporting industries, with larger assets, to become eligible for the KUK scheme. And at the same time, the credit ceiling for those in supporting industries could be raised.

- Reviving a liquidity credit scheme only for supporting industries within a limited extent of money supply increase being calculated so as not to cause worries about inflation. Introducing two-step loans as a source of this liquidity credit. Either setting up an exclusive loan frame for supporting industries in the two-step loan now under negotiation or newly setting up other two-step loans with the purpose of developing supporting industries. (Supporting industries are expected to provide the basis for export promotion and therefore the introduction of a new liquidity credit scheme will not always result in worsening debt/service ration but, on the contrary, it may improve it.)

- As a final step to improve the financing to supporting industries, setting up public fi-

nance institutions specializing in the development of small- and medium-scale manufacturing enterprises, through which the ability to find feasible financing projects and the measures to decrease the reimbursement risks will be improved. Providing medium- and long term low-interest loans for procurement of manufacturing facilities, financing the facility lease funds and the funds for inviting foreign engineers, etc., at favorable terms shall be tried through this public finance institution.