

CHAPTER XVI
FOREIGN AND DOMESTIC CAPITAL IN INDUSTRIALIZATION*

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I. INDUSTRIAL DEVELOPMENT SINCE THE LATE 1960S

The unsettled political conditions of the 1950s and first half of the 1960s were not favorable to economic development in general and industrial development in particular. With the Indonesian economy steadily deteriorating during the first half of the sixties, the small manufacturing sector was burdened with under-utilized capacity, as the flow of imported raw materials and parts and components slowly dwindled to a trickle as a result of steadily declining foreign exchange reserves.

With the advent of a new government in 1966 which, unlike the previous government, was strongly committed to economic development, industrial development started in earnest for the first time since independence. In the period 1966-1968 the average annual growth rate of the manufacturing sector reached 6.02 percent, and accelerated to 12.44 percent during the following three years.

We can divide industrial growth since the late 1960s into three phases: a) the phase of 'easy' import substitution (1968-1975), b) the phase of 'moving upstream' (1975-1982), and c) the phase of slowdown (1982-present).

a) The first phase (1968-1975): 'easy' import substitution. During this period a wide range of locally made consumer goods (including light consumer goods and consumer durables) gradually replaced imported goods. The firms which produced these consumer products were set up by domestic (i.e., national) and foreign investors who were spurred by highly protective import substitution policies as well as by the Foreign Investment law of 1968 (Thee 1983 : 2). This pattern of investment is quite similar to that of other Southeast Asian countries, such as the Philippines, Thailand, and Malaysia, which experienced a surge of foreign and domestic investment to set up 'tariff factories' (behind highly protective tariff walls).

Most, if not all, of these factories merely undertook 'final assembling' or 'end process' activities. For example, completely knocked down kits (CKD kits), containing a set of inter-related parts and components, were imported from abroad and assembled locally into final consumer goods. The bulk of these imported parts and components were often supplied by the parent companies located in the home countries.

b) The second phase (1975-1982): moving upstream. After 1975 the domestic market for most basic consumer goods gradually became saturated, signaling the completion of the relatively easy phase of import substitution industrialization. Spurred by the example of the newly industrializing countries (NICs) and buoyed by vastly increased oil revenues, particularly after the second oil boom of 1978/79, Indonesia's policy makers opted to push the process of industrialization one stage further by moving upstream into basic industries, resource processing industries, capital goods and intermediate goods industries, and a few strategic high technology industries (notably the aircraft assembly industry).

In pushing this 'backward integration,' the Indonesian government, through mandatory 'local content' programs (in Indonesia referred to as 'deletion programs'), required assembler firms, particularly in the automotive industry (specifically commercial vehicles), the diesel engine industry, the electric generator industry, the rice huller industry, and the household electric appliance industry, to manufacture locally a specified percentage of parts and components which until then had been imported. While in the case of certain components, the assemblers were allowed to make the components themselves (in-house manufacture), other parts and components had to be procured locally from independent, unaffiliated firms, preferably from small subcontractors (out-house manufacture) (Thee 1984 : 35).

The 'deletion programs' stipulated that the number or proportion of locally made parts and components have to be reached within a specified period of time. For instance, in the motor vehicle industry, it is stipulated that commercial vehicles (i.e., buses and trucks) have to be

'fully manufactured' by 1987/88 (Ministry of Industry 1984). This implies that these locally assembled commercial vehicles will eventually have to use all locally made parts, including engines (Thee 1984 : 15).

To a large extent the decision to move upstream was influenced by the perceived need "to maintain the growth momentum of the manufacturing sector as well as to 'deepen' Indonesia's industrial structure through the generation of as many backward and forward linkages as possible with a view to strengthen the manufacturing sector and to transform the pattern of Indonesia's foreign trade so as to decrease the share of manufactured imports as well as increase the share of manufactured exports" (CSIS 1982 : xx). These strong views of the major decision-makers of industrial policy were reflected in the extension of protection against imported intermediate and capital goods.

Stimulated by rising domestic demand for a wide range of intermediate and capital goods as well as by the strongly protectionist policies of Indonesian government, industrial development during the latter half of the 1970s led to a substantial change in the structure of the manufacturing sector. While the traditional, relatively labor-intensive, light consumer goods industries, such as food products, beverages, and tobacco, began to grow less rapidly during the latter half of the 1970s more capital- and technology-intensive industries producing a wide range of intermediate and capital goods (including consumer durables) came to the fore (Roepstorff 1985 : 35).

According to a UNIDO study conducted by Roepstorff, the share of consumer goods (excluding consumer durables) in total manufacturing value added (MVA) dropped steeply from 80.8 percent in 1971 to 47.6 percent in 1980. On the other hand, during the same period the share of intermediate goods rose from 13.1 to 35.5 percent, while the share of capital goods (including consumer durables) rose from 6.1 to 16.9 percent. The study also reveals that the share of the more traditional, labor-intensive food products, beverages, and tobacco dropped by almost one half during the decade, from 63.8 to 31.7 percent. However, the shares of intermediate industries, namely wood products (excluding furniture), industrial chemicals, other chemicals, rubber products, and other nonmetallic minerals (particularly cement) rose respectively from 1.4 to 7.0 percent, 0.8 to 4.3 percent, 3.8 to 7.1 percent, 1.3 to 4.8 percent, and 2.5 to 5.9 percent. The iron and steel industry emerged during this period, producing 3.1 percent of total MVA in 1980 (compared to 0 percent in 1971) (*ibid.*: 36-37).

The structural change which has taken place in Indonesia's manufacturing sector is also reflected in the striking changes which have taken place in the composition of imports. While the share of imported consumer products amounted to 22.1 percent (US\$180.7 million, cif) of total imports (excluding the imports of oil and gas) in 1969/70, this share had declined to 5.6 percent (US\$603.5 million) by 1984/85. On the other hand, during the same period the share of imported intermediate goods increased slightly from 48.8 percent (US\$399.7 million) to 53.1 percent (US\$5,749.8 million), while the share of imported capital goods rose from 29.1 percent (US\$238.7 million) to 41.3 percent (US\$4,477.8 million) (Republic of Indonesia 1986: 209-212).

c) The third phase (1982-present): slowdown since 1982. Since 1982 Indonesia's economic growth in general and industrial growth in particular have slowed down considerably as a result of the weakening of the world oil market. As a result, considerable concern has arisen about the gross inefficiency of the manufacturing sector and its general inability to achieve international competitiveness, which would be necessary if the manufacturing sector were to replace the oil sectors as the engine of Indonesia's economic growth and as the major source of foreign exchange earnings.

The Fourth Five Year Development Plan (Repleta IV) for the period 1984/85-1988/89 had actually targeted manufacturing growth at 9.5 percent. However, in view of the protracted sluggishness of industrial growth, widespread concern has emerged, particularly after a spate of lay-offs by a number of manufacturing firms. Critics of current industrial policy have therefore suggested that the government abandon, or at least postpone, the highly capital- and technology-intensive industries which were promoted during the two oil booms of the 1970s, and shift to a more outward-looking and less protectionist policy that would encourage the more labor-intensive,

export-oriented industries in which Indonesia has a comparative advantage.

II. THE AGENTS OF INDUSTRIALIZATION

Who then undertook Indonesia's industrialization? In asking this question, we are really asking who organized necessary inputs for industrial production in the country. Here, we are not particularly interested in individual people and institutions, however, but in certain categories.

The categories we are interested in are 'the state,' 'Indonesia entrepreneurs,' and 'foreign capital.' And we call the companies owned by the first, state enterprises; by the second, private Indonesian companies; and by the third, foreign companies. Below we will discuss primarily these three categories of companies, and treat them as the agents of industrialization, even though the actual agents are the people and organizations behind them.

In some ASEAN countries, there is no interest in the first category, since the state is not directly involved in industrialization. But in Indonesia, since the Sukarno period, the state has been an active participant and dominates certain sectors. So, in order not to attribute the rise of Indonesian capital completely to private Indonesian capital, we decided to separate state from private capital.

As usual, foreign companies include 100 percent foreign-owned companies and joint ventures -- that is, the companies in which there is foreign equity.¹⁾ In addition, however, we include the private Indonesian companies which depend heavily on foreign licensing.

What constitutes 'heavy dependency' is somewhat a matter of subjective judgment. Many of the large companies we regard as private Indonesian companies use foreign technology. But they are not regarded as foreign companies, because their dependency on foreign technology is not crucial.

The companies which depend 'crucially' or 'heavily' on foreign technology produce foreign-brand products. For example, all automobile assemblers are owned by Indonesian capital: by law, foreign equity is not allowed in this sector. These assemblers, under the technical assistance of foreign (largely Japanese) auto makers, make foreign-brand motor vehicles. We also find similar examples in household electrical appliances.

These companies are considered foreign, because they depend almost totally on foreign companies for operation. If their licenses were withdrawn, they would hardly survive.²⁾ However, there are Indonesian companies which make products under both foreign and their own brands. In this case, unless the 'own brand' products are really minor, they are considered to be private Indonesian companies. For example, a tire manufacturer,³⁾ a few cigarette manufacturers, and a number of pharmaceutical companies fall in this category.

Therefore, foreign companies in this paper include some in which there is no foreign equity, but exclude others in which foreign equity is involved. In the case of a joint venture with minority foreign equity, foreign control may be negligible. Such a company has to be excluded. Thus, a foreign company in this paper simply means one that depends on foreign equity and/or foreign technology 'heavily' or 'substantively'.

III. INDUSTRIAL STRUCTURE

It is beyond the bounds of endeavor for us to cover the entire manufacturing industry. What we intend to do is to take the industries in which foreign capital tends to be important,⁴⁾ and investigate the relative importance of the state enterprises, private Indonesian companies, and foreign companies.

The typical method in this type of investigation is to use an industrial census as the major data source.⁵⁾ However, because of the problem of the reliability of the census data, and because what has been published is too aggregative for an in-depth analysis, we decided to use a different approach. For each of the industries in which we are interested, we identified the major companies involved and classified them according to the categories just discussed. And

from market share, production or production capacity (depending on the availability of data), we tried to compute their relative importance.

We focus on major companies, since they are the vanguard of industrialization, and there is a great deal of interest in knowing how domestic response has been in this upper stratum. For example, in the shipbuilding and repairing industry, there are numerous companies catering for the need of fishermen and small shippers, but by excluding them, we can focus on the companies with large shipyards -- the companies which are usually regarded as the modernizers of the industry.

Table 1 is the result of our findings. In an industry in which it was possible to quantify the relative importance of the three categories of companies, this was shown by distributing a total of 10 points over the three. When it was difficult to quantify, the relative importance is indicated in words. In the rest of this section, we will briefly discuss in turn the industries listed in the table.

1. Food and Beverages Soft Drinks

In the area covered by P. T. Djaya Beverages Bottling Co., the major bottler of Coca Cola, the area which accounts for 60 percent of total soft drink consumption in Indonesia, foreign companies' market share is only about 45 percent (in terms of quantity).⁶⁾ There is an Indonesian company called Teh Botol Sosro, which sells as many bottles as all the foreign brands combined. This company, which began production only about 10 years ago, has made spectacular progress by focusing on non-carbonated drinks (foreign brands are usually carbonated) and offering the consumers a much lower price (at present, about half the price of Coca Cola). In this industry, there are no state enterprises.

Monosodium Glutamate (MSG)

In the other ASEAN countries, the Japanese company Ajinomoto has a virtual monopoly over this product, but in Indonesia, its market share is about 37 percent, which is a little smaller than that of the Indonesian brand 'Sasa' (a Korean brand), but its market share, about 13 percent, is much smaller than Ajinomoto's. For a food industry, the MSG industry is capital-intensive, and is difficult for a Southeast Asian company to succeed, but the company producing 'Sasa' (Sasa Fermentation, a member of the Roda Mas Group) has been quite successful.

Cigarettes

There are two foreign companies (BAT Indonesia and Faroka⁷⁾) producing prestigious foreign brands, but they do not dominate the cigarette industry. They produce what the Indonesians call 'rokok putih' (white cigarettes), and even in this field, there are two large private Indonesian companies (Sumatra Tobacco Trading and Kisaran Tobacco, both at Medan) competing with them. Furthermore, 'rokok putih' are less popular than clove cigarettes ('rokok kretek'). The giants in the clove cigarette industry are three private Indonesian companies: Gudang Garam, Djarum Kudus, and Bentoel. In 1981, these three companies accounted for about two thirds of the clove cigarettes sold (ICN May 2, 1983: 8). In this industry, there are no state enterprises.

Beer

Three companies are producing beer in Indonesia today (Multi Bintang Indonesia, Delta Djakarta, and San Miguel Brewery Indonesia⁸⁾). All of them are foreign companies. There are no Indonesian companies in this industry. This contrasts with the situation in Thailand and the Philippines, where local beer companies are strong. In Indonesia, beer is one of the few non-durable consumer goods where foreign brands dominate.

2. Textiles

Synthetic Fibers

In this industry, Japanese companies dominated for some time since production began in 1972. However, their position has recently been eroded by the entry of an increasing number of private Indonesian companies.

In nylon filaments, two Japanese companies, Indonesia Toray Synthetics and Indonesian Asahi Chemical Industry monopolize production. In the more important polyester fibers, however, some

Table 1 The Relative Importance of the Foreign Companies,
State Enterprises, and Private Indonesian Companies
(Measured on the 10 Point Scale)

Industry	Foreign Companies	State Enterprises	Private Indonesian Companies
1. Food & Beverages			
Soft Drinks	5		5
MSG	5		5
Cigarettes	2		8
Beer	10		
2. Textiles			
Synthetic Fibers	6		4
Spinning	3	2	5
Weaving	minor		dominant
3. Plywood			
	2		8
4. Pulp & Paper			
Pulp	3	4	3
Paper	1	2	7
5. Cement			
	2	4	4
6. Petroleum Refining			
		10	
7. Petrochemicals			
	In the middle-stream, state enterprises and foreign companies are more important, but in down-stream, private Indonesian companies dominate.		
8. Fertilizer			
		10	
9. Dry-cell Batteries			
	4		6
10. Detergents			
	4		6
11. Pharmaceuticals			
	7	1	2*
12. Steel			
	moderate	substantial	moderate
13. Aluminum Smelting			
		10**	
14. Shipbuilding & Repairing			
		substantial	moderate
15. Automobiles			
	10		
16. Automobile Tires			
	6	2	2
17. Household Electrical Appliances			
	dominant		minor

Note: *prescribed medicine only.

**'states' enterprise. (See the text for explanation.)

Source: See the text.

private Indonesian companies have made inroads into the market. They first moved into the polyester filament market (starting in 1979), then into the polyester staple fiber market. In polyester filaments, the Japanese company Tifico is the only foreign company involved, and its capacity was only about 30 percent of the total in early 1986.⁹⁾ In polyester staple fibers, the only Indonesian company operating then was Tri Rempoa at Tangerang, but by the middle of 1987, two more private Indonesian companies are scheduled to commence production.¹⁰⁾ In early 1986, Tri Rempoa accounted for about 25 percent of the total installed capacity.

Spinning

In early 1986, 86 companies belonged to the Indonesian Spinners Association, and the total number of spindles was about 2.4 million. Of these, state enterprises accounted for 21 percent, private Indonesian companies 48 percent, and foreign companies 27 percent (Japanese 10, Hong Kong 7, and Indian 10 percent).¹¹⁾ In this sector, private Indonesian companies were weak in the early 1970s, but by 1984 there were 35 private Indonesian spinning mills, some of them quite large. (The largest was Agropantes, which owned about 90,000 spindles. This was bigger than any foreign or state spinning mill.)

Weaving and Garments

In weaving, although there are no official statistics, evidence indicates that private Indonesian companies are dominant. Foreign companies, except those engaged in spinning at the same time, are not allowed in this sector. Out of the 29 foreign companies engaged in spinning, 15 were also engaged in weaving.¹²⁾ The other 14 companies sold all of their yarn to private Indonesian weavers. The 15 companies which were also engaged in weaving¹³⁾ did not consume all of their yarn. On average 40 percent of their yarn seems to have been sold.¹⁵⁾ So, their share in fabric production must have been much smaller than in spinning. In the case of garments, although there are a few foreign companies in the bonded warehouse zone at Tanjung Priok, and some of the Indonesian companies obtain technical assistance from foreign companies, this sector is almost completely dominated by private Indonesian companies.

3. Plywood

In the early 1970s, practically no plywood was produced; but in the mid 1970s, progress began under the encouragement of the government, which wanted some processing on logs being exported. Then came the so-called SKB Tiga Menteri (Surat Keputusan Bersama Tiga Menteri), a joint ministerial decree issued by three ministers, which banned log exports from 1980. After this decree, the increase of plywood production accelerated, and in 1984, production reached a level of 3.9 million cubic meters. In mid 1985, 98 mills were operating, of which 15 were foreign companies and the rest were private Indonesian companies. In terms of capacity, the 15 foreign companies accounted for 16 percent of the total [ICN August 12, 1985: 15-26].

4. Pulp and paper

Although the government is involved in this industry, its relative importance in paper production is not large. In 1984, five state enterprises produced about 90,000 tons, which was about 22 percent of the total production. A foreign (Taiwanese) company (Indah Kijat)¹⁴⁾ accounted for another 13 percent, and the rest was produced by private Indonesian companies.

Many of the Indonesian companies produce paper with purchased pulp, so in pulp production, their share is smaller. On the other hand, all the five state enterprises are integrated and produce pulp. The total capacity of pulp production in 1984 was 317,000 ton per annum. Of this, the five state enterprises accounted for 39 percent, the one foreign company 28 percent, and the seven private Indonesian companies the remaining 33 percent.

5. Cement

There are 10 companies in this industry (to be exact, nine companies and one group (Indocement)

of companies). In 1985, about 10.5 million ton of cement was produced. The five state enterprises (Semen Padang, Semen Gresik, Semen Tonasa, Semen Baturaja, and Semen Kupang) produced 3.9 million tons, whereas the three foreign companies (Semen Cibinong, Semen Nusantara, and Semen Andalas Indonesia) produced 2.3 million tons. Indocement Group (including Cirebon Cement, which is an affiliated company of Indocement) accounted for the rest (38 percent).¹⁵⁾ This group is controlled by the famous Indonesian entrepreneur Liem Sioe Liong. Recently, the Indonesian government bought 35 percent of Indocement Group's equity, but since this is a minority holding and there is such a powerful figure as Liem Sioe Liong, this can be still regarded as a private group.

6. Petroleum Refining

Unlike the other ASEAN countries, there are no multinational companies operating refineries in Indonesia. Petroleum refining is the monopoly of the state oil company Pertamina.

In the early 1960s, Shell and Stanvac were operating refineries, but the Sukarno government decided to nationalize the oil industry (exploration, refining, and marketing) in 1961 (Law No.44) and began negotiating with the two companies on the terms of take-over. Shell's refineries were transferred to Permina (a predecessor of Pertamina) by 1966, and Stanvac's to Pertamina by 1969. Since Stanvac's transfer was completed, there have been no private (national or foreign) refineries in Indonesia.¹⁶⁾

7. Petrochemicals

There is no integrated petrochemical industry in Indonesia. Naphtha, from which ethylene, propylene, and other major petrochemical products are made, is produced in Pertamina's refineries, but all of it is exported. Indonesia's petrochemical plants are in the middle-stream and downstream sectors.

There are six plants in the middle-stream sector today. Three of them are owned by Pertamina. One plant produces PTA (purified terephthalic acid) at Plaju, Palembang, which is used for synthetic fiber production. The paraxylene needed for PTA production is imported. Another plant produces methanol from natural gas at Pulau Bunyu, Kalimantan. Methanol is used for production of synthetic glue (needed in the plywood industry) and paint. The third plant began producing polypropylene in 1973. Production stopped in 1982, however, since production costs were too high, and the plant has remained inactive since then (ICN October 22, 1984: 6).

There are two plants producing PVC (polyvinyl chloride) from imported VCM (vinyl chloride monomer). Both are Japanese companies (Standard Toyo Polymer and Eastern Polymer). And there is one private Indonesian company producing polystyrene from imported styrene monomer (Polychem Lindo).

There are a number of companies producing final plastic products (PVC pipes, etc.). Here there are no state enterprises. There are some foreign companies (for Meiwa Indonesia producing PVC printed film and sheets), but their market shares are small. In this sector, private Indonesian companies dominate. Many of them are, however, small, although there are several companies with investment of US\$ a few million.

8. Fertilizer

There are six fertilizer companies, all of them state-owned. The largest company, Pupuk Srivijaya, is typical of fertilizer production in Indonesia. It is located at a site where natural gas is available. From natural gas, ammonia is obtained, and from ammonia, urea is produced. Four other companies use the same method. The only exception is Petro Kimia Gresik. Since there is no natural gas in the vicinity, it buys ammonia or takes ammonia from the naphtha it buys, and produces ammonium sulphate. Also, it imports phosphate to produce phosphatic fertilizer, and potassic fertilizer to produce mixed fertilizer.

Fertilizer production is related to oil and natural gas, and could be part of Pertamina's operation, but the fertilizer companies are separate state enterprises. Pusri (Pupuk Srivijaya) was set up as an independent organization as early as 1959, well before Pertamina came into existence. This enabled the fertilizer industry to remain independent of the oil industry in the 1970s when Sutowo, head of Pertamina, was diversifying rapidly with large oil revenues.

9. Dry-cell Batteries

While Union Carbide's 'Eveready' is the dominant brand in the other ASEAN countries, in Indonesia its market share is lowest. The best selling brand is the Indonesian brand 'ABC,' which is owned by Intercallin, a member of the ABC group, which is also known as a food producer. According to one estimate, its share is about 65 percent. The second best-selling brand, 'National' (owned by Matsushita Electric of Japan), accounts for another 20 percent, and 'Eveready' for the rest (15 percent).¹⁷⁾ Local brands are often sold at lower prices, but this is not true of 'ABC' batteries. They compete with the foreign brands on quality.

10. Detergents

Although several companies produce detergents, two of them dominate the industry. One is the ubiquitous multinational company, Unilever, which is known for 'Rinso' in Indonesia. The other is a private Indonesian company (Dino Indonesia, a member of the Roda Mas Group), which sells its detergents under the brand name 'Dino.' At present, 'Rinso' seems to have the upper hand over 'Dino,' but not by much. Dino Indonesia is offering strong competition to Unilever.

11. Pharmaceuticals

There are two kinds of modern medicine. The first is available only with a doctor's prescription, the second is sold freely over the counter. Foreign companies are not allowed to produce the second category of medicine, but in terms of value, the former is far more important. In this category, according to one estimate, foreign companies account for about 70 percent of the market.¹⁸⁾

There are numerous foreign companies involved, and none is dominant. The largest foreign company around 1985 was Ciba-geigy, but its market share was not much more than 3 percent (SCRIP March 24, 1986: 23). The 70 percent market share of the foreign companies is spread much more evenly than in other industries dominated by foreign companies.

There are a few state enterprises involved in this industry (the major one being Kimia Farma), but private Indonesian companies are far more important in terms of market share. In 1985, the largest private Indonesian company was Kalbe Farma, whose market share of 4.9 percent was bigger than Ciba-Geigy's (3.4 percent). Interbat was the second largest, with a market share of 3.1 percent. These large Indonesian companies produce medicines under license through technical tie-up with foreign manufacturers who have not invested in Indonesia. They also produce their own medicines, sometimes using expired foreign patents. Also, the fact that it is legally possible to 'pirate' foreign patents sometimes helps Indonesian pharmaceutical companies.

There is also traditional medicine called 'jamu.' It is not prescribed by doctors who have received modern medical education, but for a large number of poor people who go to see 'dukun,' jamu is the major medicine. It is also taken as a health drink. We do not know exactly how important this is compared with modern medicine, but in view of the large number of stores selling jamu medicine (some of them located in modern buildings), sales must be substantial. Three Indonesian companies, Air Mancur, Jago, and Nyonya Meneer, dominate this field.

12. Steel

Unlike most of the other ASEAN countries, there is an integrated steel mill in Indonesia. It is a state enterprise, Krakatau Steel.¹⁹⁾

Krakatau is active in strengthening the upstream portion of the steel industry. At present, it can supply steel for construction and shipbuilding, but cannot produce thin steel plates used in industries such as automobiles and household electrical appliances. To fill this vacuum, it has set up Cold Rolling Mill Indonesia Utama, together with the Liem Sioe Liong Group and a Western steel company (Sestriacier SA of Luxembourg, contributing 20 percent equity). Production is scheduled to start in 1987. In the plate, Krakatau Steel has set up Pelat Timah Nusantara with Tambang Timah (a state mining company) and a private group (Nusamba, 24 percent). Construction of the plant was completed in 1985, and commercial production has begun.

There are a number of melting plants (which produce steel from scrap iron). The largest melting plant is an Indian company (Ispat Indo) which accounts for about a third of the total melting capacity. The rest are private Indonesian companies.

Being an integrated steel mill, Krakatau produce most major steel products. The only exception is GI sheets, which are produced only by private companies. In this sector, although technology is relatively simple, one third of the total capacity is owned by foreign companies. The rest is owned by private Indonesian companies.

In structural steels and steel pipes, both Krakatau Steel and private (foreign and Indonesian) companies are involved. In these products, the only foreign producer is the Indian company mentioned above. So, Indonesian companies dominate, and of Krakatau Steel and private Indonesian companies, the latter are far more important.

In tin cans, there were about 10 relatively large companies operating in the early 1980s. Of these, only one was foreign (United Can). This was, however, the biggest, and its market share seems to have been substantial. It has factories not only in Java, but also in Bali, Sumatra, and Sulawesi, and caters to the needs of factories located in those places.

13. Aluminum Smelting

This is the monopoly of Indonesia Asahan Aluminum. Since its major shareholders are Japanese, it should be regarded as a foreign (Japanese) company; but certain factors make us reluctant to do so. One is that the amount of investment is huge for a foreign investment. The equity of the company is US\$400 million, and the total amount invested is US\$2 billion. The major reason for such large investment is that the electricity needed for aluminum smelting was not available, and the company therefore had to construct a dam, a hydro-electric power plant, and transmission facilities.²⁰⁾

The Indonesian government has 25 percent equity in this company, and the rest is held by Japanese investors. This is not, however, a typical Japanese investment: half of the Japanese equity is held by a financial institution of the Japanese government, the Overseas Economic Cooperation Fund (OECF). The rest is held by 12 Japanese companies (five aluminum smelters and seven trading companies). This company is thus a 'state' company in that the Japanese and Indonesian governments hold a majority (62.5 percent), and cannot therefore be treated like a private foreign company.

14. Shipbuilding and Repairing

This is one of the weakest industries in Indonesia. In the late 1970s, none of the shipyards had built a ship exceeding 1,000 tons (JICA 1979: 34). In the past several years, the situation has improved somewhat, and now a few yards can build ships up to 3,500 tons, but all large ocean-going vessels are still built abroad.

There are no foreign companies involved in this industry. Of the 12 largest shipyards, seven are state enterprises, and the rest are private Indonesian companies.²¹⁾ In terms of tech-

nological sophistication, state enterprises are more advanced, and their operation is, on average, bigger than that of the private companies. Most private companies thrive on orders placed by the Indonesian oil company, Pertamina, for which they have built tug boats, small oil tankers (used for inter-island shipping), offshore structures, platforms, and derricks.

15. Automobiles

All motor vehicles produced in Indonesia carry foreign brands. Japanese brands are dominant, accounting for more than 90 percent of the motor vehicles sold in 1985²²⁾. In this year, the four best-selling brands were Daihatsu, Mitsubishi, Suzuki, and Toyota.

Unlike such goods as TV sets, it is difficult for an Indonesian company to make inroads into this industry, because major parts (except tires, batteries) are not standardized, which makes it impossible to shop around for them. In particular, the key part of an automobile, the engine, is not available in the market, since every major auto manufacturer produces its own engines. Even if an Indonesian manufacturer managed to obtain engines and other parts and to produce automobiles, they would be of poorer quality and not acceptable to consumers. So, the typical pattern in Indonesia, as in other ASEAN countries, is for a local company to tie up with a major foreign company and produce its products under license.

16. Automobile Tires

Bridgestone Tire Indonesia, Goodyear Indonesia, Gadjah Tunggal, and Intirub are the four major tire producers, accounting for about 95 percent of the market. The first two are foreign companies, the third a private Indonesian company, and the fourth a state enterprise. In mid-1984, in terms of installed capacity, the two foreign companies accounted for almost 60 percent of the total, while the state enterprise and the private Indonesian company split the remainder [ICN June 25, 1984: 4].

Tire manufacturing does not seem to present insurmountably high technical barriers to Indonesian companies, since production know-how is not new and capital requirement is not terribly high. But there are some new technologies which foreign companies can use to offer better quality products, and a local company cannot effectively compete in price, for the consumers are willing to pay for quality. After all, they do not want an accident at high speed due to an inferior tire.

17. Household Electrical Appliances

There are no reliable estimates on the market share of foreign companies in this industry, but there is no question that they dominate. Among the foreign companies, Japanese companies are by far the more important.

Household electrical appliances can be divided into two categories: wireless goods and white goods. The former consist largely of electronic goods, such as radio, TV, and video, while the latter include airconditioners, refrigerators, and washing machines. In the second category, one estimate puts the Japanese market share at about 90 percent.²³⁾ It is difficult for an Indonesian company to penetrate this market. One major problem is that much larger investment is necessary for the production of these goods than for the first category. For the first category, production consists primarily of assembling, but for the second, metal working machines and other processing facilities are needed. These machines in turn require a number of skilled workers, most of whom have to be trained within a firm.

In the wireless goods, the Japanese share is lower (probably around 60-70 percent). In addition, there is a European share, and Indonesian companies (no state enterprises) have also made some inroads. For example, the major kretek producer, Djarum Kudus, set up Hartono Istana Electronic, which assembles 'polytron' color TV sets. In addition, there are a few other Indonesian brands competing with well established Japanese brands. This is possible because the

necessary components can be imported cheaply from Taiwan, Hong Kong, and Korea. The rapid revaluation of the Japanese yen in the first half of 1986 offers Indonesian producers a good chance to increase their share, because the Japanese producers depend on Japan for major components.

IV. OVERALL CHARACTERISTICS

1. The belief that foreign capital dominates Indonesian industry is a myth. In the capital-intensive material industries, where foreign capital is often present in the other ASEAN countries, there is no foreign capital in Indonesia. There are no multinationals in petroleum refining, and no foreign integrated steel mills and fertilizer plants. Shipyards are also all Indonesian-owned. Even in the less capital-intensive processing industries, there are a number of large Indonesian companies (for example, cement and spinning).

There are, however, sectors where foreign companies dominate. In sheet glass (which we did not discuss in the previous section), a Japanese company (Asahimas) has a monopoly. In PVC production, two Japanese companies are the only producers. In pharmaceuticals, European and American companies dominate. In some food products, foreign share exceeds 50 percent. However, it is in consumer durables, especially automobiles and household electrical appliances that foreign domination is especially noticeable. However, one should bear in mind that there are a number of other industries in which foreign capital is of minor importance or not involved at all.

2. Foreign companies are strongest in the fields where the following three conditions are met. a) There is proprietary knowledge involved in production, so that an Indonesian company cannot make up for its technological deficiency by buying machines. b) There is an economy of scale in production, so that a large part of output has to be exported to make up for the deficiency of domestic demand. c) There is a problem of safety involved, so that it is difficult to make up for lower quality with lower prices. The automobile industry, for example, meets these three conditions.

While a well-established brand gives a foreign company an advantage, this alone is not enough to deter Indonesian companies from entering the field. It has proved possible for Indonesian companies to compete with well-established foreign brands by offering lower prices and/or undertaking vigorous sales campaigns. (A case in point is the success of the Roda Mas group in detergents and MSG.)

Capital intensity alone is not also sufficient to deter Indonesian companies. First of all, the Indonesian government undertook a number of capital-intensive projects. There are also a number of private plants in which a few million US dollars or more have been invested. Unless a project requires a really large investment, Indonesia can usually undertake it alone.²⁴⁾

In the early phase of industrialization under President Suharto, Indonesia was short of capital, and foreign investment moved into various fields where capital requirements were the major barriers to their development. Textiles is one such example. As the Indonesian economy improved, however, more Indonesian capital moved in, and the field was gradually closed to foreign investment. As a result, the share of foreign capital declined.

3. Among foreign companies, Japanese companies dominate. Table 2 shows the amount of investment in the manufacturing industry by country, including foreign loans. Japan is by far the biggest investor, even if its investment in basic metals (which includes investment in aluminum smelting) is excluded.

The importance of Japanese companies is in fact greater than indicated by Table 2. In our classification, foreign companies include Indonesian companies which are licensees of foreign brand products. A number of Indonesian companies produce under license Japanese consumer durables (especially automobiles and household electrical appliances). Since the Indonesian companies which we regard as heavily dependent on foreign technology are concentrated in consumer durables, which Japanese products dominate, the inclusion of such companies further increases the importance of Japanese companies.

In some of the sectors where foreign capital is important, there is little or no involvement by Japanese companies. There are no Japanese companies in soft drinks, beer, cigarettes, pulp and paper, detergents, or melting of scrap iron. In pharmaceuticals, Japanese companies are involved, but European and American companies dominate.

Table 2 Foreign Investment in the
Indonesian Manufacturing Industry
(as of March 31, 1983)

Unit: US\$ million

Country	Amount
Japan	1,901.1
(excluding basic metals)	990.7
Hong Kong	170.4
Taiwan	8.2
Singapore	21.5
India	3.3
Australia	42.9
USA	151.2
Netherlands	66.2
West Germany	58.7

Note: The figures include foreign loans
(in addition to equity investment)
and are realized amount.

Source: Bank Indonesia.

4. In no other ASEAN country has the government been so actively involved in industrialization as in Indonesia. The state oil company, Pertamina, has a monopoly over petroleum refining and is at present the only producer of methanol and PTA. The government-owned Krakatau Steel is the only integrated steel mill in Indonesia. In fertilizer, there are no private companies. In shipbuilding, state enterprises are bigger and have better facilities. In cement, pulp, and yarn production, the share of state enterprises is substantial.

Government involvement in industry began in 1957, when President Sukarno took over Dutch companies. Many of these operate today, mostly under new names. This government take-over is one important reason for the direct government involvement in industry today, but it is not the only reason. There has also been a streak of socialist thought influencing the economic policy of post-Independence Indonesia that is partly the result of the independence process itself. Unlike the other ASEAN countries, Indonesia had to fight for independence. The enemy was Dutch colonialism, which was really an extension of Dutch capitalism. Thus, Indonesian independence fighters were attracted to socialism, as the other polar economic system which negates capitalism. However, people like Sukarno did not go all the way toward socialism. They preferred a mixture of socialism and capitalism.

While the fervor of independence gradually faded, socialist influence remained alive. Under President Suharto, it took the form of economic nationalism, and with the abundance of oil money, the government undertook a number of large investment projects. For example, the integrated steel mill, Krakatau Steel, was one of these projects. Others include new petroleum refineries, fertilizer plants, and cement factories. There were also ambitious petrochemical projects (for example, the construction of olefin and aromatic centers), but except for the recently completed PTA and methanol plants, the others have had to be shelved due to the recent

decline of the oil price.

There are small state enterprises which were formerly Dutch companies, but the importance of state enterprises lies in the capital-intensive, material-producing sector. In the less capital-intensive processing or finished-products sector, private companies, including foreign companies, are predominant. Thus, we can characterize the Indonesian industrial structure as 'upstream socialism, downstream capitalism.'²⁵⁾

5. In view of the fact that private capital was stifled during the Sukarno period and little capital was available for industrial development when President Suharto began rebuilding the economy the response of Indonesian entrepreneurship in the last 20 years has been impressive.

For example, consider the Indocement Group. In about 10 years, a huge cement complex was built in Cibinong, a suburb of Jakarta, and it is estimated that about one billion dollars was invested there.²⁶⁾ At full capacity, it can produce 7.7 million tons of cement per annum, which is more than any single cement complex in Japan can produce. The Indocement complex is probably the biggest in Asia.²⁷⁾

This may be an exception case, but there are a number of other relatively large investments. Nien Kin constructed two large steel plants and several integrated textile mills. There are several other large mills. Recently, Dan Liris, Maligi, and Sandratex -- spinners owning at least 60,000 spindles each -- joined together to set up a plant to produce polyester fiber, partly as a step for backward integration. In the plastic industry, there are several plants in each of which at least several million US dollars has been invested (for example, Polychem Lindo producing polystyrene and Argha Karya Prima Industry producing polypropylene film).

How these investments were financed is not entirely clear. Some must have come from the companies' own funds, but an important part must have come from state banks. It is conceivable that since the government had large revenues in the 1970s due to the high oil price, part was channeled into state financial institutions and made available for private investment. In the case of plywood, part of financing seems to have come from prospective foreign buyers who were willing to advance necessary capital against future delivery.

The other question is how the necessary technology was obtained. In the mid-1960s, the level of technology and the number of skilled personnel seem equally as serious a problem as capital. This problem, however, turned out to be less serious than expected. Many new technologies are embodied in machines, so that their introduction into Indonesia was largely a matter of finance. If an Indonesian company did not know how to set up a plant, a foreign engineering company could be employed to do it, and if it did not know how to operate it, the engineering training. When foreign technicians were needed on a long-term basis, they could be hired as individuals or obtained through a company offering technical assistance.

What is surprising is the strength of local brands. In no other ASEAN country do local brands compete with established foreign brands as well as they do in Indonesia. Strong local brands are, for example, Gudang Garam, Djarum, Bentoel (the three are clove cigarette brands), Teh Botol (soft drinks), Dino (detergent), Sasa (MSG), and ABC (dry-cell batteries).

Some local brands have taken advantage of the traditional tastes of the Indonesian people. The Botol took advantage of the tea drinking habits of the people, and jamu medicine producers used to their advantage the reliance of many Indonesians on local herbs. Also, the clove cigarette manufacturers realized the potential appeal to the Indonesian people of clove cigarettes, which had been produced on a much smaller scale before cigarettes were brought in from the West.

Some successful local brands targeted on the lower income classes, which could not afford to buy foreign brands. In this case, there was initially not much competition between Indonesian and foreign brands. But once Indonesian companies succeeded in establishing their brands among the lower classes, they began using this as a base to compete with foreign brands for the higher income classes. The most spectacular success story of this type in recent years has been the rise of local brands of cosmetics.²⁸⁾ As a result, foreign brands have been losing their share of the cosmetics market. Clove cigarettes pioneered this, and now cosmetics is following the same path. Teh Botol today does not compete much with Coca Cola in the same market (Coca Cola

is consumed largely by people in higher income brackets), but in the future it may follow the path of clove cigarettes and cosmetics.²⁹⁾

In some cases, local brands had an early start, and had an advantage over foreign companies in getting accepted by consumers and setting up a solid distribution network. Ajinomoto, for example, was a few years behind Sasa, and this put it at a serious disadvantage. For one thing, Ajinomoto found it difficult to sell its products to consumers who were accustomed to the taste of Sasa.

A puzzling question is why those conditions which helped local brands in Indonesia did not prevail in the other ASEAN countries. One important reason seems to be the economic chaos and the absence of multinational companies before around 1970, when industrialization got off the ground. The public were less exposed to foreign brands, partly because there were no foreign multinationals and partly because economic deterioration narrowed their choice. And because the foreign companies were cut off from Indonesia for a number of years, they could not strengthen their position in the country and take advance measures to prevent the entry of local producers.

The strength of local brands should not be over-emphasized. Where the technological superiority of foreign brands is obvious (in safety, reliability, service, etc.), these are quite strong. This is particularly true in consumer durables, where foreign, especially Japanese, brands are strong. It is also true, however, that in the areas where foreign-brand products are less technically superior or where quality is not of overriding importance and can be overcome by lower prices, Indonesian brands are fairly strong. This situation is somewhat unique among the ASEAN countries.

6. Among the private Indonesian companies we studied, only a handful could be identified as pribumi companies. One is in steel pipes (Bakrie), a few are in shipbuilding (for example, the Ibnu Sutowo family), a few in textiles, and several in plywood. We may have missed some, but there is no question that practically almost all major manufacturing companies are owned by Chinese.³⁰⁾

In the Indonesian economy, the Chinese dominate the private sector. This situation can be partly attributed to government policy. For one thing, the government has not taken serious measures to nurture major pribumi companies. Here and there, one can find exceptions, but the government seems to have felt that even if the Chinese dominate the private sector, as long as there is a large state-enterprise sector, the overall economy will not be dominated by the Chinese.

Even in the private sector, the government does not allow the Chinese a free hand. In granting concessions and extending financial support, the government requires that if a Chinese is involved, he has to tie up with a pribumi. What happens, however, is that the pribumi becomes a sleeping partner, leaving management to the Chinese. Of course, the pribumi demands a share of the profits, but he is usually quite happy to let the Chinese 'do the donkey work.' The government agency in charge simply examines whether the application fulfills its requirements, but rarely investigates whether the pribumi who appears on the application will be really involved in management as a fully-fledged partner. So, even in the sectors where, in some ASEAN countries, indigenous entrepreneurship is strong because of government support, in Indonesia the Chinese dominate.

In the ASEAN countries, including Indonesia, business tends to be dominated by the Chinese. One reason for this is the fact that an indigenous businessman does not have the kind of business network that his Chinese competitor can make use of. At least until a few decades ago, it was difficult for him to get a bank loan, since banks were owned by Chinese or foreigners. It was difficult for him to buy on credit, since the suppliers were all Chinese or foreigners. Today, the situation has somewhat improved for the pribumi, especially in the field of finance, but the distribution network is still dominated by the Chinese. There is also the question of work ethic. For the Chinese, because of social discrimination, business is virtually the only field left where he can excel, and he usually works hard to succeed. In this situation, if the government adopts a laissez-faire attitude, business becomes dominated by the Chinese. Certainly, the Indonesian government is far from laissez-faire; but it did not do much to nurture

pribumi entrepreneurs who could take the lead in the private sector.³¹⁾

As a consequence, pribumi entrepreneurship is underdeveloped, but it is more noticeable outside industry. There are large pribumi businessmen in shipping, banking, oil-related fields, life insurance, construction, hotel, air transportation, and publishing, but only a few are involved in industry. Why this is so is not clear, although two possible reasons suggest themselves. One is the weakness of pribumi entrepreneurship in distribution. Usually, the producers have to have a distribution network in order to sell their products, but since such networks are mostly controlled by Chinese who are reluctant to accept the pribumi manufacturers, the pribumi manufacturers are at a disadvantage in competing with the Chinese manufacturers, even if their products are of comparable quality. The few relatively large pribumi manufacturers we found are usually in areas where a distribution network linking the producer to the consumer is not necessary. (For example, the major purchase is the government, as in the case of shipbuilding.) The only exception is textiles, in which there has been a long tradition of pribumi involvement in distribution.

The other problem for the pribumi in industry is that of technology. For a pribumi entrepreneur contemplating going into industry, it was probably difficult for him to get pribumi engineers (they had to be pribumi since the Chinese in general did not want to work for them), since those available wanted to work for state enterprises (and those in state enterprises did not want to risk their careers by moving to a company whose success was uncertain). For a Chinese entrepreneur, this was less of a problem since Chinese engineers were not happy to go to state enterprises (for fear of discrimination). And if domestic skill was not sufficient, a Chinese entrepreneur could hire technicians from Hong Kong or Taiwan. A pribumi entrepreneur could also hire foreign technicians, especially from Japan and Europe, but for a number of categories of skill needed in Indonesia, Taiwan, and Hong Kong technicians were probably cheaper for similar service rendered. To a pribumi entrepreneur, these people were not available primarily for cultural reasons.

V. CONCLUDING COMMENTS

We divided major industrial companies into state enterprises, foreign companies, and private Indonesian companies, and examined their relative positions in 17 industries. We found that state enterprises dominate the capital-intensive material industry (the 'upstream sector'), and the private (foreign and Indonesian) companies dominate the less capital-intensive finished products industry (the 'downstream sector'). Thus, we characterized the industrial structure of the Indonesian industry as 'upstream socialism, downstream capitalism.'

In the downstream sector, there is substantial foreign involvement, but it is largely in automobiles and household electrical appliances that foreign companies are dominant. In pharmaceuticals, foreign companies are also strong, but their superiority has been somewhat eroded by the challenge of Indonesian companies, especially the jamu makers, who exploit the traditional mentality of the Indonesian people. In other fields (except beer and a few other minor products we did not cover),³²⁾ private Indonesian companies are quite strong. Even in the fields where several million US dollars is needed as a minimum investment, there are a number of Indonesian companies, and foreign companies, which dominated such fields initially when Indonesia lacked capital, have been losing importance in recent years. Textiles is a typical example of this.

From a nationalist point of view, the presence of foreign companies may be still too large. The major way to reduce their importance is to raise the level of technology in Indonesia, because in the fields where foreign companies dominate, Indonesia does not possess the necessary know-how. To raise the level of technology, it may be important to train people in high-tech fields; but at the same time, Indonesia still has to train people in mature areas, such as spinning, weaving, and finishing. In such areas, there are still a substantial number of foreign technicians hired by Indonesian companies.

The importance of state enterprises in the upstream sector has serious implications concerning the question of industrial efficiency. In general, state enterprises are not efficient, and Indonesia's state enterprises are no exception. For example, recently, one state cement company reported huge losses.³³⁾ Krakatau Steel and Pertamina's petrochemical plants are also known not to be very efficient. But Indonesia cannot privatize them, because privatization means 'Chinesenization' or 'foreignization,' for there are no 'genuine' pribumi businessmen who are ready to take over them. So, the government is stuck with most of the state enterprises. (Small ones may be sold in the future, but this does not change our argument.) Yet, if such enterprises dominate the upstream sector, the downstream sector has to buy expensive inputs from them since their products are protected from import competition. As a consequence, its products not only become expensive to the consumers but also cannot be exported. In fact, the present 'high cost' structure of the Indonesia economy is due partly to the dominance of state enterprises in the upstream sector. Unfortunately, since the government is stuck with state enterprises for the reason pointed out above, there will be no way-out from this in the foreseeable future. So, though industrialization will go on, it will continue to be plagued with the problem of inefficiency.

ACKNOWLEDGMENT

* In May 1986, we conducted a number of interviews with Japanese businessmen in Jakarta. Although we cannot name them individually, we would like to record our appreciation to those who gave us their valuable time. We would like also to express our appreciation to JETRO for letting us use their Indonesian collection. Also at JETRO, Mr. Sori Harahap often provided us with information on Indonesian businesses, for which we are very grateful. Lastly, we would like to thank Dr. Dorodjatun Kuntijorojakti of Universitas Indonesia for letting us use liberally his files on Indonesian businesses and industries. Without this help, this study would have been impossible.

NOTES

- 1) At present, there are few 100 percent foreign-owned companies in Indonesian industry. The only exceptions are garment manufacturers in the bonded warehouse zone in Tanjung Priok, Jakarta.
- 2) One example is the once prominent Indokaya group which virtually vanished after it lost the Nissan license.
- 3) Besides producing their own brand products, the tire manufacturer, Gadjah Tunggal, produce the 'Yokohama' brand of tires and the 'Inoue' brand of tire tubes; the cigarette manufacturer, Sumatra Tobacco Trading, produce the 'Salem' and 'Winston' brands of cigarettes; and the kretek cigarette manufacturer, Bentoel, produces the 'Marlboro' brand of cigarettes. (To be more exact, Bentoel's subsidiary produces the 'Marlboro' brand.)
- 4) One of the authors studied *Singapore and the Philippines*. See Yoshihara (1976;1985). From these studies, we had a rough idea of what industries might have a high foreign share.
- 5) In V. N. Balasubramanyam (1984), the 1974 industrial census are used to compute the relative importance of the three categories of companies. Also, the same data is used in Peter McCawley (1979: 29), and Hal Hill (1985: Tables 20 and 21).
- 6) Interview with Mr. Yoshiaki Hatanaka of P. T. Djaya Beverages Bottling Col. (May 1986).
- 7) BAT's well known foreign brands are 'Benson,' 'Ardath,' 'State Express,' and 'Lucky Strike,' and Faroka's are 'Dunhill' and 'Pall Mall.'
- 8) The foreign investors in these companies are Heineken of Holland (Multi Bintang), NV. De Brouwerji de Drie Hoefijzer of Holland (Delta Djakarta), and San Miguel of the Philippines (San Miguel Brewery Indonesia).
- 9) To move into polyester filament was easier since the optimum scale of production is smaller.

- 10) The data for this paragraph were supplied by Indonesia Toray Synthetics.
- 11) The data source is ASPI (Indonesian Spinners Association).
- 12) The data source is ASPI.
- 13) This percentage was computed by assuming that one spindle produces roughly 20 pounds of yarn per month and one loom consumes 700 pounds of yarn per month. (The number of spindles and the number of looms of foreign textile companies were available at ASPI.) The yarn produced in excess of what could be consumed by their own looms was considered to have been sold.
- 14) The data source is Indonesian Pulp and Paper Association.
- 15) The data source is ASI (Asosiasi Semen Indonesia).
- 16) For the history of the nationalization of the oil industry, see Anderson G. Bartlett III et al. (1972).
- 17) The data source is National Gobel. A similar figure (70 percent) is given in CISI Raya Utama [1986: 1].
- 18) Interview with Mr. Motoo Kusaka of Takeda Indonesia (May 1986).
- 19) The basic data source of this section is Nippon Tekko Renmei [1984]. Nippon Tekko Renmei is the association of steelmakers in Japan.
- 20) The data in this paragraph were supplied by Indonesia Asahan Aluminum.
- 21) The 12 shipyards are Dok & Perkapalan Tanjung Priok, Dok & Perkapalan Surabaya, Ippa Gaya Baru, Kodja, Pelita Bahari, PAL Surabaya, Industri Kapal Indonesia, Adiguna Shipyard, Dumas, Inggom Shipyard, Menara, and Intan Sengkunyit. The first seven are state enterprises, and the last five are private companies.
- 22) The data source is GAKINDO.
- 23) Interview with Mr. Iwao Nishimura of Sanyo Industries Indonesia (May 1986).
- 24) The ability of Indonesia to undertake capital-intensive projects (especially in steel and petrochemicals) has somewhat declined in the past few years due to the decline of oil price. (Oil revenues are the major source of income for the Indonesian government.) The government had to put off large investment projects, and also invite foreign and private Indonesian capital to undertake capital-intensive projects, but so far, foreign investment in such projects has not materialized, except that in Cold Rolling Mill Indonesia Utama by a European company on a minority basis.
- 25) The term 'state capitalism' is often used instead of 'socialism.' However, 'state capitalism' is a contradiction in terms. One of the key foundations of capitalism is private ownership of the means of production, especially capital. In socialism the means of production is owned by the state. So, a state enterprise is alien to capitalism, and the term 'state capitalism' does not make sense. It can be best regarded as a form of socialism.
- One might object to our use of the term 'socialism,' for it is often associated with egalitarianism and it can be hardly said that the Indonesian power elites are committed to egalitarian ideals. But a socialist state need to be no more egalitarian than a capitalist state. For example, Japan seems more egalitarian than the Soviet Union. State ownership of the means of production can make the distribution of income and wealth more equal, but does not necessarily do so. Thus, the fact rather than the effect of state ownership should be the criterion of socialism.
- 26) Semen Nusantara has a capacity of 750,000 tons per year, and the investment needed was about US\$ 100 million [ICN April 4, 1983]. Today, Indocement's capacity is about 10 times as large as Semen Nusantara's (ASI). From this, the figure of US\$ one billion was derived.
- 27) Liem Sioe Liong, who controls Indocement Group, is a close associate of president Suharto, and has used this connection for his businesses, and thus some people are reluctant to regard him as a private entrepreneur. But if we exclude politically connected entrepreneurs, very few are left in the capitalist sector of Indonesia today. The fact is that in Indonesia, both business acumen and political connections are required to become big. Liem Sioe Liong is the most politically connected businessman, but on this account alone, we cannot exclude him from the group of entrepreneurs.
- In the case of Indocement, he invested his money on the conviction that it would pay off. there

was a great deal of risk involved, and this we regard as the essence of entrepreneurship. Contrary to what some argue, he could not monopolize the industry. For example, he could not prevent other plants from being established, nor could he take away demand from those whose plant utilization is higher. (That of Indocement is lowest today.)

28) Popular local brands are 'Viva,' 'Marbella,' 'Sariayu,' and 'Mustika Ratu.'

29) Coca Cola is not unbeatable. Once it dominated the soft drink market in Japan, but in the past several years a large number of Japanese brands have appeared, and Coca Cola's share is no longer large.

30) A person is considered as Chinese if his father was Chinese. So, under this definition, people like Bob Hasan, who have been fairly well integrated into Indonesian society, become Chinese.

Our definition centers on the father, since identification was easier for the prewar period. All Chinese then carried Chinese names, and we consider those who did as Chinese. This may not be a rigorous definition, but it suffices for our purposes.

31) Specifically, the government has not done much to help pribumi businessmen in the capitalist sector. It has done considerably more to help small businessmen through KIK and KMKP loans.

32) They are margarine (Unilever), instant coffee (Indofood Jaya Raya (Nestle)), powdered and condensed milk (Food Specialities Indonesia (Nestle), Indomilk (Australian Dairy Corp.), Friesche Vlag Indonesia), and shoes (Sepatu Bata Indonesia).

33) Semen Kupang.

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CHAPTER XVII
THE ROLE OF NON-ECONOMIC FACTORS IN ECONOMIC DEVELOPMENT

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I. INTRODUCTION

Economic development to become operational and effective by its very nature requires the fulfillment of economic prerequisites. Without properly functioning economic factors, there will be no possible economic development. Land, capital, manpower, technology and management are indispensable. This truism is well known to almost every individual, even to the layman who has never ventured the smallest economic enterprise.

But what became a revelation to many people in business and in the academic world after the second world war is the fact that even the best combination of economic factors will not easily start a well functioning economic development without a favorable political and cultural basis. A stable and capable government with a sound sense for the economy of its country, a population that is willing to divert its cultural focus from other targets to the improvement of its material well-being and the absence of political and social disturbances, turned out to be equally important to push the economy of a country towards higher planes.

When the second world war came to an end and Europe was left as an economic ruin, the USA felt itself obligated to extend a helping hand to rebuild that damaged economy through its Marshal plan. It did so by making financial capital, machineries and managerial assistance available for rebuilding industries, trade and agriculture, including the necessary infra structure. These economic factors were put to use by the European countries with astonishingly rapid success.

To prevent Soviet influence from expanding to newly independent countries, particularly in the Third World, the USA adopted a policy of extending a similar economic aid for their freshly started national development. If those countries could be made economically viable, so it was hoped, they should be able to ward off communist penetration or even consider to become new allies of the USA. Economic and technical aid in the form of capital, modern technology and experts were dispatched and put at the disposal of national governments. But only discouragingly little, or sometimes even no success emerged from the well meant efforts to help national economies to develop.

What was accounted for the striking differences in success between European and Third World Countries? The economists and other social scientists from the donor countries arrived at the conclusion after serious studies that economic aid to Europe fell on fertile cultural ground and so stimulated an economic revival. Both economic and socio-cultural factors were already present in most of the European countries in pre-war time, and only the economic factors were destroyed by the war. Therefore when the missing factors were supplied through the US Marshal plan, all development prerequisites were more or less completely available. The spirit of economic recovery did the rest.

On the other hand the economic aid elements which were offered to the Third World countries fell into a culturally insupportive ground, if not on culturally resisting soil. The government and the people of those countries did not have the experience of running a modern economy, at least not a Western style economy which requires planning, organization, administration, appropriate technology and professional management. Such elements were either absent or very weakly developed in most of the Third World countries. Many newly emerging countries did not even have the effective urge to work in the line of economic development, submerged as they had been in the past decades in the serene harmony of social contemplation with little attention to the material needs of life. Social and eventually spiritual equilibrium was in their cultural value system far more important than material wealth and economic growth. When Foreign economic aid arrived, it could not be matched with favorable social and cultural supporting elements from the indigenous societies.

There is only one social institution in this cultural atmosphere which can accept the burden of preparing and starting and economic development for the country. By social and cultural force this institution is the government of a national state.

The role of the government in a less developed country in relation with national economic development is of decisive significance. A country is called less developed because science,

technology and the economy in that country is in a low stage of development. As a consequence there is not much power in that field hidden in society, at least not much that can equal or perhaps challenge the power in the hands of the government. Unless there are political forces in the society working against the government -- opposing forces that are most often than not fed by foreign powers -- the most powerful and influential social institution in a Third World country is its legitimate government.

In relation with economic development governments of Third World countries, of which Indonesia is one, can assume different political attitudes. A government may determine a basic policy of caring for the social and spiritual well-being of the population above everything else, leaving economic development to the people themselves to make a living of their own choice. Economic freedom within the context of such a government policy is seemingly established. But one should not forget that there are still many social and cultural values and norms which have to be adhered to in economic development even if the government has decided not to interfere in the private economy of the population. Freedom from government interference does not necessarily mean freedom from one's social environment.

A society may have a culture with values and norms which operate in support of its economy, particularly when the focus of development in that culture is mainly directed to the people's material well-being, and less so to other fields of life. Without too much interference by the government a liberal cultural atmosphere may then develop in which economic and other cultural forces combine to further the economic interests of society. The classic example of the Protestant ethic which is considered a strongly stimulating source for the emergence of capitalism because of its teaching that religious merit can be gained in this world by hard work for the welfare of oneself and that of his fellow men, is a case in point.

On the other hand there may be societies which maintain a culture which gives priority to social and spiritual values above the needs for material gain in life. Such values may be ingrained in the indigenous culture themselves, but they may also have developed as a response to long lasting oppression by feudal or colonial rules which are concerned with their self interests and do not allow the emergence of popular economic forces that may become serious economic competitors dangerous to the group of which the government is representative. Anyway the absence of stimulating or supporting social forces is not conducive to economic development.

Another attitude which may be adopted by a government in Third World countries is similar to the first one described above, but with this difference that economic endeavors are not entirely left to the people without any obligation on the side of the government. Aware of its political and social responsibility a government pursues a policy of creating a favorable climate for the growth of the economy and of protecting and stimulating its further development against harmful influences from other social forces. Through differential tax policies, subsidies and other preferential treatments the government can help in the development of certain sectors considered vital and strategic to the people at large and also to discourage other fields of economic activities which do not well fit into the general policies of growth and development. Only in cases whereby the private sector is not interested in or not capable of doing work on the level of public welfare the government may decide to take certain economic activities in its own hand.

The Third possibility open to a government in relation with economic development is to consider itself fully responsible for the whole well-being of the entire population within the ideological context of social justice for all and everyone in the country. In this respect the government may decide to take all or the most important parts of the economy in its own hands by creating state owned enterprises or by persuading the private sector to engage in economic endeavors following the design as determined by the state. This in fact is the reverse of the capitalistic system as described in the first alternative.

In its short history the Republic of Indonesia has to some extent and with varying results, but not necessarily in the same order as presented above, experienced and experimented with each alternative policy with regard to its national economic development. The policies may have emanated from a deliberate choice of those in power, but it may also often show the result of converging political, economic and social forces impinging upon the government at a certain time

from which there is no escape.

II. POLITICAL AND ADMINISTRATIVE FACTORS

1. Sukarno Era

Since the proclamation of independence on 17 August 1945 the young Republic of Indonesia had to go through almost three decades of political turbulence and administrative instability before it could arrive at a more or less orderly way of managing state affairs. A psychologist would say that the country had to pass its period of infancy with all its Sturm-Und-Drang features before maturity of age could emerge. To the sociologist and political scientist the sudden change from colonial to independent status after years of severe sufferings from political oppression, poverty and war exploded into a revolutionary movement to disengage people's life from the humiliating past and to attain at the shortest possible time a national state of democracy, social justice and prosperity.

It was apparent that ideological forces during the two initial decades after the proclamation of independence ran high, much higher than the actual abilities of the people and its leaders to achieve the long term goals of independence. But the deficiency in actual abilities was more than largely compensated by the revolutionary spirit of the young and the old, the educated and the illiterate, and of men and women of all walks to wage a guerrilla warfare without proper weapons and without sufficient military experience against British and subsequently Dutch armed forces, equipped with the latest armory of the subsiding second world war. The national armed revolution to defend the proclaimed independence against foreign intruders and in 1948 against a domestic communist rebellion was waged simultaneously with the violent destruction of all social and cultural values that the colonial regime for more than three centuries stood for. At the same time, however, the people desperately engaged in unprecedented efforts to give Gestalt to a new national state, complete with a state philosophy, a constitution, a parliament, a government, an army, navy, air and police force, and a state bureaucracy.

Political destruction of the old colonial system was carried out while a new independent nation had to be built. All this had to be achieved without any foreign aid or advice for a population of 70,000,000, made up of more than 400 different ethnic groups and tribes, spread over an archipelago of more than 13,000 islands, with a 94% illiteracy, an ill working telecommunication system and no experience in administration on a national scale.

Faced with the gigantic task of educating the people into a sense of national independence and of maintaining the unity of the country in this great diversity, not only for the present but also for unlimited times to come, it was only logical that the founding fathers of the new Republic directed their full attention to political goals before other problems could be properly dealt with. In the plain language of the people, the national economy had to wait until political affairs were firmly settled.

But nevertheless efforts were made in 1946, while Indonesian guerrilla units were still fighting invading armed forces of the Dutch, to make a start with economic development of the country. Vice President Mohammad Hatta, and economist educated in the Netherlands and an intellectual fighter for independence, collected a small number of young intellectuals into a brain trust charged with the preparation of an economic system for the new state and nation. But working only with national Zeal and without appropriate data, in an atmosphere filled with political unpredictability of the future and with ongoing turbulent social and cultural changes that enveloped the entire population there was no way for the brain trust to even make a concept of an economic system. It quietly faded away.

With legal imports and exports blocked by the Dutch navy and with a large part of factories and industrial machineries destroyed as a target of the scorched earth policy of the military and guerrilla command, there was only one sector of the national economy which could continue running, the food agriculture of the village people. This age old source of living of the

populace in the rural areas withstood with only little damage the harshness of the war and the national revolution. The rural youth did participate actively in the armed revolution to defend the country's independence, but the members of the older generation in the villages continued tilling the land to produce the food needed to feed the fighting units. At the time of the revolution, from 1945 to 1950, whatever was called the national economy of the young Republic was nothing else but the people's traditional agriculture that grew rice, cassava, maize, sago and other food crops. At the same time village communities functioned as protecting and revitalizing social entities to army and guerrilla units that had to retreat from the front lines of combat.

The revolution could survive without industries, but it certainly would not be able to hold long without agriculture. Industrial products grew scarcer all the time, but the village farmers supplied food in all seasons, not in abundance perhaps because of problems of transportation, but enough to keep up the spirit of the revolution. Rice, the staple food of 60% of the population, became the price leader in the market. When rice prices went up, all other prices followed. The government or local army commanders endeavored very often to fix rice prices, but such efforts only resulted in creating flourishing black market, uncontrollable by any force. Agricultural resilience is definitely national resilience in war and peace time.

On the 27th of December 1949 the armed revolution came to a sudden halt. The Republic of Indonesia, fighting simultaneously on the guerrilla theatre and the U.N. arena was successful in forcing the Netherlands' government to a round table conference, whereby the Netherlands agreed to recognize *de jure* the Republic of Indonesia, to transfer the sovereignty over the former Netherlands East Indies (minus West New Guinea which remained an area in dispute until 1963) to the new state, and to retreat. Soon after that other countries followed with their recognition, and the Republic of Indonesia entered the U.N. as its 60th member.

From that day on the government of Indonesia was free to determine its state policies without disturbances from external sources -- at least not in the open -- but with tremendous domestic problems. The economy of the country, as in every country after a war, was in very bad shape. Scarcity of household commodities and capital goods, an industry seriously damaged by neglect and the scorched earth policy, infrastructure that was unattended for more than ten years since the outbreak of the second world war, absence of managerial skills and entrepreneurial spirit, all this projected long years of economic deprivation. Inflation ran wild. The economically worst off were the group of fixed wage earners, whose wages always lagged behind the ever upwards spiraling movement of prices on all levels. To this group belonged the employees of the government, who were in charge of the implementation of whatever policies and decisions the cabinet and individual ministers deemed fit to make.

Real payment of government employees was so bad that a month salary from the lowest to the highest echelons could keep a family alive for only ten days, sometimes even only for seven or five days. Those who had connections with the world of private business spent part of their working time there for additional income or they played on the black market. But others who were not in a position to do so had per force to resort to corruption for survival.

In spite of the seriously deteriorating conditions of the national economy the all powerful president Sukarno proclaimed in his inflammatory speeches that the revolution was not yet over. In his words the people had to continue to destroy and to build and again to destroy and to build in that all encompassing revolution. What he meant to say was that the people should get rid of all colonial and feudal legacies in order to build an Indonesian socialist society in which every individual will enjoy social justice and prosperity. In this endeavor Sukarno assumed leadership as President, head of the state and as the Great Leader of the Revolution.

In continuing the spirit and pursuing the goals of the revolution Sukarno consistently emphasized that politics should reign supreme as commander in development. The economy of the country would, as he asserted, come into shape by itself when the Indonesian socialist political system was firmly established and put into operation.

Meanwhile the people responded to the call of Sukarno by organizing political and semi-political organizations, the leaders of which were incessantly fighting each other to win a seat

in the cabinet. Sometimes a new ministry was called into being or an existing one divided just to accommodate political leaders and his followers. Every time a political party leader became head of a ministry all strategic and decision making positions in that ministry were put into the hands of members of the minister's political group. At the time the minister was replaced by someone else from another party he and his assistants were replaced by members of the other party. The ministerial assistants, having the status of government employees, were not dismissed but were simply assigned unimportant jobs or kept in salaried inactivity, while new employees from the other party were installed, again as government employees. Ministerial and employees turnover went so fast that continuity of policies could not be maintained while execution of government policies had to be entrusted to employees without proper administrative experience and understanding of their jobs.

The rush for political power was so pervasive that tens of political parties came into being, each with its own mass organizations for the mobilization of the youth, women, workers and farmers in an uncontrolled liberal democracy. When the first general elections were held in 1955 more than one hundred contestants were registered to win a seat in parliament and eventually in the cabinet. In his last days of political leadership Sukarno had a cabinet which was known as the cabinet of the one hundred ministers. Cabinet members had a hard time to know each other and to keep track of the policies of others.

In order to strengthen his grip on the nation's political life Sukarno decided to leave the system of liberal democracy, which he recognized the people and its leaders were politically, sociologically and psychologically were not yet ripen for. Instead he introduced a guided democracy (demokrasi terpimpin) by which he grouped all political parties and affiliated mass organizations into three groups which he named NASAKOM, NAS standing for nationalism, A for agama or religion, and KOM for communism.

While the endless political fights gradually seeped down from the national leadership level to the provinces and further down to the people in the urban kampongs (slum areas) and the rural population, the economy was permeated and became a part of the political arena. In this fight the communist sector of NASAKOM emerged as the best organized the best disciplined organization, compared with the other two groups. It was also to the interest of the communist group to maintain and if possible to increase the overall disorganization in the country including disorganization in the national economy. Labour unions affiliated with the Indonesian Communist Party harassed the management of many industries with impossible demands, only to bring about disorganization. The communist controlled farmers union BTI (Barisan Tani Indonesia) organized "one sided actions" (aksi sefihak) whereby groups of farmers under BTI leadership occupied agricultural and plantation land against the legal rights of its owners. This was done under the pretension of implementing the landreform act passed in 1961.

The strategy was that once the social disorganization was at its peak and the government was not able to keep law and order, the communist party could easily organize a rebellion leading to a forceful take over the government.

A few cases can be mentioned here as an illustration of the extremely disjointed national economy in the decade of the 1950's and continuing into the late 1960's. Because of the rapidly and incessantly increasing monetary inflation the government for years at a stretch was unable to make a complete annual budget. All that could be done every year was to list the policies and actions each ministry wished to do in a budget year, but without figures indicating the estimated cost. The budget was in that way merely a political program, but not a financial plan. As a result no effective financial control could be administered on government expenditures.

Furthermore a budget was not presented to parliament for ratification prior to the year of operation, but only one of two years after a budget had expired. Because of the fast and frequent cabinet changes -- between 1950 and 1956 there was a cabinet change at the rate of once every ten months -- a long ago expired budget had to be presented to parliament by a cabinet other than the one which had made it up. In fact a state budget in parliament became only a means to an unlimited political debate between opposing parties on virtually every issue a party could think of.

As such was the situation on the political level inflation went so wild that in 1966 -- in a period of peace and no war -- it rose to 650%, thereby paralyzing small scale enterprises of the people and degrading business activities to mere speculation.

At the peak of the inflationary process the government decided in 1966 on a monetary sanitation by declaring every Rp. 1,000 worth only Rp. 1. As a result many domestic enterprises collapsed and the economy did not show appreciable improvements. Inflation continued to run as before because no effective follow up measures were taken to increase production and organize a better distribution.

Contrary to the expectations of many foreign political and economic observers the population reacted calmly and unemotionally to the government's drastic monetary measures. The widespread indifference of the people was interpreted by many Indonesian leaders as an indication of the people's apathy towards government's policies. The people in both urban and rural areas moved into black markets which were beyond the controlling capabilities of the government and the police. Barter trade became common practice next to the frustrating use of money for buying and selling.

At one time President Sukarno, probably responding to the alarming economic reports of his ministers, made a public appeal to put order in the disorderly national economy. Whoever could present to him a plan that could save the country from further economic disaster would be given the chance of implementation as minister of economy affairs. Indeed a few people made some suggestions on an individual basis, but none was accepted.

The economic chaos and the political instability all over the country seems to have been what the communist party was waiting for. After having infiltrated into the army and air force and after having trained militant political cadres in Jakarta and the provinces the party attempted a coup d'etat, thereby killing a number of high ranking army officers in the Head Quarters of the Armed Forces in Jakarta and other officers in the region. The swift and apparently unexpected counter operations by General Suharto, Commander of the Army Strategic Forces, were successful in crushing the attempted coup. But it also unleashed cropped angers of the population which acted with widespread violence against members and sympathisers of the communist party. The party collapsed, and soon it was outlawed by the government while communism was banned. The military rose to power and Sukarno was succeeded by Suharto as President. A new era began, the era of the New Order (Orde Baru).

2. The Era of the New Order

The Orde Baru under President Suharto, supported by the Armed Forces and the rising political group Golkar, was clearly anti-communist. It introduced some political innovations of a fundamental nature.

The Armed Forces (further called by its Indonesian acronym ABRI), formerly denied political participation, is now recognized as having a Dwi Fungsi (a double function) as a military and as a socio-political force. One third of the seats in the MPR (Supreme Consultative Assembly) and DPR (Parliament) were assigned to the ABRI at the nomination by the President.

NASAKOM, considered the major source of political unrest, was abolished and the number of political organizations was reduced from 11 to 3, Golkar, PPP and PDI. Initially each political organization had its own characteristics, the Golkar representing people with a spirit of development, PPP appealing to religious groups, and PDI working on the basis of nationalism. However a law was passed in 1985 requiring each political and social organization to recognize only Pancasila as its sole ideological basis. All other ideological bases had to be abandoned.

The New Order also started a "Movement Back to the 1945 Constitution" and Pancasila. The structure, the policies, and the operation of the state and all its agencies should be consistent with the constitution. Deviations by the former regime had to be corrected. A Pancasila democracy was introduced, in which the solution of problem and conflicts has to be sought through peaceful discussions with decisions taken by consensus. Voting to arrive at a decision is considered against the spirit of Pancasila since it demonstrates a quantitative confrontation

of a majority against a minority. Confrontation leads to the continuation of a political conflict and is therefore not in line with social unity, which is highly valued in Pancasila and in Indonesian culture at large. As a consequence there should not be an opposition in either MPR or Parliament. All members of MPR and Parliament have the duty to serve the country and the nation on the sole basis of Pancasila.

In the line of the New Order's political formula the Pancasila has to be enacted through a national development program which requires the active participation of the whole nation and in which development of the national economy is accorded the highest priority. Political life has to be kept quiet so as not to cause social disorganization and political instability, all of which was decided detrimental to economic development. To actualize its new role in the Pancasila context the ABRI was declared the dynamizing and stabilizing agency in support of the national development program.

Since the inauguration of the first New Order cabinet which was manned primarily by economic technocrats and ABRI generals, the economic development of the country started to make great strides. Realizing the great shortage of capital, trained and experienced manpower and new technologies in the country, the government appealed for aid from friendly governments. The response from the non-communist part of the world was most satisfying. A number of the most economically advanced countries including the USA, Japan, West Germany, France, Australia and others organized themselves into the IGGI (Inter Government Group on Indonesia) which under the chairmanship of the Netherlands functions as an international consortium to make an assessment of the development problems and progress of Indonesia and to decide on the amount and nature of aid Indonesia deserved to be given every year. The presence of the Worldbank and the International Monetary Fund in this consortium has always been very influential on the decisions of the IGGI.

While the Indonesian government before the era of the New Order strictly prohibited the investment of foreign capital in Indonesia for fear of bringing back capitalism and colonialism into the country, the New Order government realistically recognized the need for capital infusion from abroad to help finance and organize new enterprises. One of the first acts it performed was the issuance of a foreign and domestic investment law to make capital investment in Indonesia attractive.

Another change in government policy concerns the population problem. In the days of nation building until 1969 the government decided that to become a great nation the Indonesian people had to be able to make the best benefit from the abundant natural resources in the country. Looking at the vast areas outside Java which were still underpopulated the government determined that more millions of people were needed to fill the country. Family planning was recognized as working against the interest of nation building and was therefore banned. The New Order on the other hand decided that population was growing too fast in comparison with the rate of economic development. The rapid increase of the unproductive part of the population could endanger the results of production in that development. The rate of population growth had therefore to be curbed and family planning had to be introduced and seriously implemented on a nation-wide basis.

On the government level the annual state budget could be made with exact figures of revenues and expenditures and was presented to parliament for approval as a rule three months before the fiscal year. The policy of a balanced budget was constantly and strictly enforced so as not to make the budget a source of inflation and economic instability. Great attention was paid to the development of the infra structure to facilitate transportation on land and sea and in the air, all of which were considered vital to the continuous growth of the national economy.

After four consecutive five year plans the results are visible and tangible. National income per capita rose from US\$ 100 in 1969 to almost US\$ 600 in 1982, making Indonesia move from the status of underdeveloped to moderately developed. The increased production of rice, textiles and cement has turned the country from a major importer into an exporter of these commodities to the world.

To make a telephone connection from Jakarta to other cities before 1969 took at least one full

day's waiting for a proper connection. Now it takes only a few minutes, thanks to the satellite used since the second five year plan. The road network has expanded to reach most of the formerly inaccessible villages, opening the communities from centuries long physical and social isolation. The air transport system now offers flights every day to take passengers in a few hours to any major island in the archipelago. This is a considerable improvement compared with the days or weeks, one had to spend on travel by boat or wheel to reach some remote point in the country.

The success of the economic development under the Orde Baru is partly also due to the high revenues the country received from the oil industry. This sector of Indonesia's industry, seriously damaged during the war and the revolution was neglected until the end of the 1950's when a number of army officers were put in charge of its restoration and rehabilitation. Their remarkable success made Indonesia into the largest oil producer in Southeast Asia and the oil industry became the largest domestic source of revenues to support the national program of development.

It is beyond any doubt that the Orde Baru government with its consistently implemented program of national development, primarily focused on the development of the national economy, has saved the country from an economic collapse and has subsequently blown new life into the economy of the country. In fact development has taken place not only on the level of the nation's economy, but other sectors of life have received its stimulating benefits as well. Education, mass communication, sports and the arts have made considerable progress in the wake of economic development.

At the base of this development is the political and social stability that has become firmer with every ensuing *Repelita* (Five Year Development Plan). This is reflected in the stability of the government and the continuity of its development policies. The ABRI-Golkar combination of government has been in power now for about twenty years, and is very likely to stay in power after the 1987 elections.

This established stability and the long continuity of the New Order policies, however, is breeding its own seeds of anti-development forces. Because of the government's long and stable life political issues have faded away and the duties of governing become a working routine. Fresh ideas and new initiatives fall into a decline, leaving the government busy with the implementation of eroded styles of development. In such a growing situation the government bureaucracy gradually takes over the powers of the government, which then becomes a government of bureaucrats.

This unintended process of change has now reached a rather advanced stage in Indonesia. The discussions on the draft state budgets between the executive and the legislative institutions no longer reveal new insights in development, but proceed on the same arguments of former years. New development projects do no longer require lengthy studies, but can be organized efficiently on the basis of experience in other similar projects. Political considerations on such new projects are now toned down to administrative procedures. The national planning agency, Bappenas, has transformed itself from an institution bursting with the spirit of development and the conception of fresh ideas into an office for the coordination of draft work plans and budgets from the various departments in the government. The spirit of revolution has turned into a spirit of established routine, in spite of the efforts of the Angkatan '45 (the 1945 revolutionary generation) to continue their value system and courage that have changed Indonesia from a dull colony into an independent country filled with the spirit of bristling developments.

In dealing with the national economy more attention and more actions are directed by the government bureaucracy to regulating and stabilizing rather than to developing. Success is now measured by quantitative results in the same field of actions rather than by the creation of new enterprises and new projects. Quantitative growth has become more dominant over qualitative development.

The effect of this spirit in the government was felt by the private sector in the growing power of the government in economic development and routine procedures, resulting in a growing dependence of the private sector on government's approval and licenses in their activities. To

find the shortest ways out of the growing labyrinth of government regulations private business managers made it part of their practices to establish personal relationships with those in the government who could be made useful in the pursuit of their business goals. These personal relationships between private and government personalities easily turn into a symbiosis profitable to a specific company and the government officer in charge, although it is socially disapproved and legally intolerable as malpractice leading to unfair favoritism in issuing government permits and licenses.

Government regulations have become so stringent and so intricate, and the officers in charge of their implementation so demanding vis-a-vis private enterprise that the government bureaucracy was felt increasingly stifling instead of stimulating the private sector of the economy. The long wait for a government approval for certain business actions delayed commercial and industrial activities to the desperation of many managers. Increase of costs and loss of profits could not be avoided during the period of waiting, next to the missing of sometimes important contractual deals.

The government bureaucracy was in a good position to maintain its dominant role in the nation's economy as long as the government remains the largest capital spender on account of the many big projects and the large funds it could distribute to contractors and consultants through tenders and other administrative procedures.

At the end of 1986 a new wave seems to be rising in the world as one of the actions of man in search of a solution of the problems created by the international economic recession which so far has not yet shown any reliable indication of a forthcoming recuperation. This new wave involves the drive for privatization of state owned enterprises that have been established initially to help stabilize a country's economy, but which have slowly developed into large enterprises in competition with private companies. It is the general opinion in many countries, including Indonesia, that state owned enterprises are less well and less profitably managed than private ones. Without the special privileges which they enjoy from the government many state owned enterprises would have great difficulties to survive.

Closely related to the wave of privatization is the movement for deregulation of private business and the economy of a country in general. Both the government of Indonesia and the business world realize that too many regulations tend to have a deterring effect on the operation of the economy. In this age of jet flights, world wide telecommunications and computers speed has increasingly grown into an important factor in modern competitive economies, which very seldom can be matched by the working habits of the government bureaucracy. The more regulations a government makes for the economy of the country, the more uneconomic those regulations work. Deregulation, meaning a greater detachment of business from government bureaucracy, is considered a good step towards the solution of this problem.

Indonesia has in 1986 some 215 large and small state owned enterprises, popularly and officially known as BUMN (Badan Usaha Milik Negara, enterprise owned by the state). The BUMNs originated for a large part from Dutch enterprises which were nationalized in 1958 when the Republic of Indonesia was still engaged in hostilities with the Dutch Armed Forces because of the dispute about Irian Jaya (West New Guinea). Since then some BUMNs have been liquidated, but some new ones have been created in addition.

Since the dramatic decline of the oil prices in the international market from a peak of US\$34 per barrel to less than US\$12 the Indonesian government lost a very large part of its annual revenues.

The 1987/1988 budget shows a reduction of more than 60% for many departments. The government is no longer in the strong position for offering projects for implementation to private contractors. It is even forced to reduce projects to smaller proportions and to postpone planned projects for an indefinite time. The government's commanding position vis-a-vis the private sector is drastically weakened.

In this declining context the President has formed a commission of ministers to look into the state of the BUMNs and to advise him on the desirability and possibility of privatization.

Even if the commission would advise on the privatization of only a small portion of the BUMNs,

the fact of the creation of that commission by itself is an indication of the government's recognition of the need to limit its role in business and to give the private sector of the national economy a greater autonomy for self initiated development.

III. SOCIAL AND CULTURAL FACTORS

At the time the New Order government decided to start a national economic development program there was a serious shortage of well educated and experienced manpower in the country to do the planning. The country had tried several times before making a national development plan, but none reached the stage of implementation. The first one was done by Vice President Mohammad Hatta with a selected group of people which he called "brain trust", but the armed revolution against the Dutch that was still in full operation at that time was not very conducive to any planning. The second attempt to planning was carried out in the early 1950's by Juanda and his staff, but again the unstable political, social and economic situation did not allow for realistic planning. Statistical data and other information needed for realistic planning were very hard to get by. Then followed another trial for development planning. In 1962 a national committee was organized under Mohamad Yamin to draft a development plan. The committee, which included members from political parties and mass organizations, was successful in compiling the wishes from the various member groups but could not specify the means, methods and organization for the construction of a feasible program.

President Suharto took a bold step by giving the assignment for planning and control of its operation to a group of young university professors with doctor degrees in economics from universities in the USA and Indonesia. While this group under the skillful coordination of Prof. Widjojo Nitisastro with serious fervor laid out their national development plan, the armed forces, which had gained the recognition of political parties not only as a military, but also as a social and political force, managed to restore political and social stability which was so badly needed for planned national development. The program was made up of five year plans which emphasized economic development above development another levels of national interest. Relying on domestic sources, but with massive aid from friendly countries, the plan worked to the satisfaction of both government and the great majority of the people.

After three subsequent five year plans some comments can be made on its achievements. Except for sound and realistic planning and consistent implementation of the program, national development of Indonesia has been favorably supported by the unexpected and steep rise of oil prices in the early days of the second five year plan 1974/1979. From an average price of US\$ 4/barrel it rose to a top point of US\$ 34/barrel. As an oil producer and exporter, the largest of its kind in Southeast Asia, Indonesia has gained considerably from the rising oil prices in that period. Oil revenues have become the largest contributor in terms of finance to the state budget. More than 60% of the country's budgetary income derived from oil.

For the first time after independence the country opened its doors for foreign private investments, which came primarily from non-communist countries.

Income per capita rose from US\$ 100 in 1970 to US\$550 in 1985. Until the early 1980's Indonesia was one of the great rice importers in the world. After 1985 the country became self sufficient in that commodity. Indonesia also changed its position from textile and cement importer to exporter. Land, sea, and air transportation was carefully developed to such an extent that since the third five year plan every provincial capital, and the larger part of the district capitals all over the country can be reached from Jakarta within one day. The rural road network on the main islands was vastly expanded, thereby opening previously isolated villages and widening their social and economic horizon.

In general it can be said that the national development program has put the economy of the country on a higher level, while further progress is still expected in the years to come. To express its confidence in the further growth of the national economy and to stimulate the people to a more productive and effective degree of participation the government has boldly decided

that the sixth five year plan should bring the country to the point of take off.

So far no official interpretation has ever been given of the take off concept and people are wondering whether it should be given the same meaning as it was given by its creator, the British economist Rostow. But people in general believe that whatever the correct meaning of the word, at the beginning of the sixth five year plan Indonesia's domestic institutions and potentialities should be strong enough to sustain further national development. External development components should serve only as a supplement.

One should not look at only the economic institutions and potentialities of the country, but social and cultural factors should be seriously considered as well to assess the possibilities for this economic take off. Indonesia is a less developed country, and social and cultural factors play an influential role in the economic development as in any other less developed country in the world.

The system and concepts of economic planning have largely been taken from economic theories that originated from the West and naturally have a high Western cultural content. The urban communities in Indonesia, particularly the educated sector, have absorbed many elements of Western culture through their Western originated education and their frequent contacts with Western societies and are thus more apt to accept and implement the economic development program as designed by the government. The rural communities that comprise some 75% of the total population, however, are in varying degrees of still tradition oriented and have culturally little in common with Western economic models.

The tangible results of national development that have been achieved so far in the rural areas were made possible because of the socially and politically dominant interference of the urban political leaders which was met by the rural population with compliant participation. Without a more active and locally creative participation of the rural population it is doubtful whether further national development after the process of take off will proceed as fast as expected.

A comparison between the cultural features of urban and rural communities in relation with economic development shows a remarkable parallel with the differences between a *Gesellschaft* and *Gemeinschaft*, both of which have been conceived by the German Sociologist Ferdinand Toennies and elaborated by the American sociological theorist Talcott Parsons.

Applied to the Indonesian social and cultural theatre the dichotomy between the two concepts show the following pattern variables:

Rural communities	Urban communities
1. Affectivity	1. Affective neutrality
2. Collective orientation	2. Self orientation
3. Particularism	3. Universalism
4. Ascription	4. Achievement
5. Diffuseness	5. Specificity

Source: J. E. Goldthorpe: The Sociology of the Third World, Cambridge University Press, Second edition, 1984, pp 8 - 10.

The distinction in pattern variables between traditional rural communities and their modern urban counterparts should not be understood as dichotomies, but rather as differences in degree. It is not a matter of black and white, but it is a fluidity from black through shades of grey to white.

The concept of affectivity in this respect refers to the cultural tendency of the Indonesian society to confer an increasing confidence in an accelerated process upon an individual of long

term trustworthiness. The longer such an individual has offered his honest dedication to the welfare and happiness of his social environment, the stronger and the more inclusive the bonds between him and the community around him. The confidence that the society showers upon him may become so firm and so encompassing that everything he says or does is unhesitatingly accepted as the truth or as an example to be followed. In Max Weber's term this relationship between a trusted leader and his society is called *charisma on the side of the former*. In the Javanese language such a leader is called panutan, one who is worth following.

In view of the social system in traditional rural communities where social unity and cultural harmony are highly valued one can understand the lifelong term of office of tribal and village headmen. A short term office which may regularly rock the peaceful life of a rural community is incompatible with the deep sense of their cultural harmony. The social relationships between a tribal or village headman and his community are considered complete and mutually satisfactory only after the community feels that headman can be trusted as a father who has nothing than the best in his mind for his children.

Both President Sukarno and Suharto, the first and second President of the Republic of Indonesia, have stayed long enough in power to develop the elements of paternalism in their relationships with the people. They are not only head of state in the modern political sense, but each one in his own style is popularly recognized as father of the nation.

When President Sukarno announced to the people to continue with the revolution after the country's independence had won international recognition, the people followed him with confidence, reasoning that father knows best. This popular confidence lasted until the ever worsening national economy became so unbearable and the political situation so frustratingly unstable that the people turned away from him and went their own way.

General Suharto entered the Presidential office with a true understanding of the people's need for economic development and political stability. When he introduced his program of national development with *top priority* to the national economy the people initially accepted the political change as a welcome way out from their troubles. With the growing success of the development program the people gradually developed their confidence in Suharto as a father with the best intentions for the nation.

In spite of the erosion of affectivity in urban communities, where it has given way to affective neutrality the people's recognition of the New Order's development achievements has so far remained firm. But in fact the efforts by political leaders and by Suharto himself to depersonalize the popular concept of leadership and shift the people's confidence from his personality to the New Order have not gained popular understanding. In matters of leadership the people still need a living individual and not an abstract concept like the New Order to focus their confidence upon. Nevertheless people have been educated in the past decade to accumulate their confidence in the national development program which is more realistic in the eyes even of the non-political laymen. That confidence in this programmatic leadership is strengthened by the assertion of the government, including the President, that national development is actually a realization of the state philosophy Pancasila.

What is happening today in Indonesia is that affectivity in rural communities is still there. As a result of urbanization in the sociological sense this affectivity is fading away to give rise to affective neutrality. But efforts are being made by the Government, particularly through the Pancasila courses which have been started in 1978 and have now been administered to 15,000,000 people all over the country, to convert personalized leadership loyalties of the people to the person of Suharto into ideological leadership loyalties towards Pancasila and further to programmatic leadership confidence in the national development program.

This cultural engineering process is clearly observable in the 1987 election campaigns of the Golkar, the group which now shares power of government with the Armed Forces. As a preliminary step towards the goal of this engineering effort a law was passed in 1985 which determined that all political and social organizations can only be built upon one and the same basis: Pancasila. Ideologies others than Pancasila cannot be legally accepted as a basis of any such organization. When in past general elections political parties could campaign on different ideologies in the

1987 elections each contestant has to resort to the theme of national development to win votes. Having adopted Pancasila as the only ideological basis the best way to present themselves to the voters was for the political organizations to work out a Pancasila program of national development and offer that to the people as their pattern of leadership. The forthcoming results of those elections will supply the best evidence to evaluate whether the depersonalizing process really works.

The second pattern variable concerns the collective orientation of rural communities as against self orientation of people in the urban areas. It has been mentioned earlier that social unity and cultural harmony are generally highly valued in rural communities. In this context deviations from established norms and traditions do not find much social encouragement, even if they should lead to social innovations and improvements. Social and cultural conformity hold the rules over private individuality. In many respects collective or communal orientation prevails over orientation on individual needs and interests. Individual achievements are favorably recognized and accepted by the community in the village only after they have proven to be beneficial to the community and do not create unmanageable social problems.

But on the other hand the individual, or to be more precise the individual family can rely on the community to assist him whenever he is in need of help. This communal solidarity shows in the institution of gotong-royong in its two ways of social expression. The first type of gotong-royong requires rural families, represented by one or more members, to help other families without financial compensation whenever they need additional manpower for traditionally determined short time work like preparing land for planting, building or repairing a house, preparing wedding parties or other work for private family purposes. This type of gotong-royong is carried out by all (usually male and adult) members of the village community under the guidance of the village headman to build public works, e.g. roads, irrigation canals, a community center building, or fighting rats and other insects that harm the rice and other crops. These works are for public use.

In neither of the two gotong-royong performances is financial payment involved.

The communal spirit of the rural population is so strong that it has given rise to the popular saying* "Makan tidak makan, asal kumpul," (Eat or not eat, we stay together). In development language this saying can be interpreted as expressing the communities' attitude that economic needs are not so important, but social objectives have more weight.

In the process of development towards urban culture the saying has been reversed: "Kumpul tidak kumpul, asal makan" (Together or not together, it does not matter as long as we eat). Said in another way, economy is more important than social togetherness.

This reversed saying has been made possible because of the gradual change in social and cultural significance of communality into individuality or in the words of the earlier mentioned pattern variables from collective orientation to self orientation.

This cultural change opens the way for the individual to exert himself to serve his self interest, but without entering into conflict with public interest. It also encourages individual initiative and creativity, which are of great importance for effective competition with others. At the same time however, it marks the gradual disappearance of the traditional gotong-royong as an expression of social communality. It also introduces a diversity of professions with each profession specializing in a specific sector of social or economic needs.

The next social pattern variable on the table is particularism as reversedly distinct from universalism. Social relations in a tradition oriented rural community can in no way be ignored in an individual's economic dealings with others. The closer the relationships on the social level, the more particular are the considerations in a man's economic endeavors. In gotong-royong work of the reciprocal type a man is socially obliged to invite his close relatives and near neighbours to join in collective activities, no matter their skills, experience in work or abilities. A relative or a neighbour is invited not for his expected achievements, but merely for his joining the social group and for good relations. In this way gotong-royong is more social rather than economic in purpose.

When financial matters come into play like selling goods or services, lower prices are deter-

mined depending upon the closeness in social relationships between seller and buyer. The smaller the social distance the smaller the price demanded. One therefore has to be aware of the differences between a family price, a neighbour price, a village community member price and a stranger price for the same commodity or service.

The urban community that consists of mere individuals without gotong-royong obligations and with a stranger economic than social system of relationships shows tendencies toward universalism. In economic relationships the personality of the economic counterparts does not exercise too much influence on the price of the commodity or service sold. The determination of prices centers around the quantity and quality of the subject of the economic deals. This applies particularly in large scale transactions.

One can safely say that the small scale rural economy favors subjective personal relationships, whereas large scale urban economies tend to be more objectively impersonal. These tendencies are formalized in the adat (customs) of many village communities with regard to the disposal of land. Transfer of landrights through selling requires the approval of the village council which includes either the landowning heads of families in the community or the members of the village administration. There is a rather universal rule that land can be sold to others on a priority system. Members of the same family enjoy the first priority as buyer, members of the extended family the second, neighbours the third, members of the same village community the fourth, and other people outside the village community have the last priority. Bypassing this priority system in selling landrights is considered social and against the social ethics as determined by adat.

In close relation to the concept of particularism is the notion of ascription. While particularism is applied in economic relationships with one's specific social environment, ascription refers to the special privileges in public life accorded to individuals on the basis of his social descent. In a feudal society social status is inherited from parents to children and determines one's role in his social relationships with others. Descendants from high status personalities are accorded a high priority over others of lower status for public service, irrespective their real capabilities. Even in today's social system that tries to democratize political and economic life on the basis of the state philosophy Pancasila ascription cannot be fully avoided. Where business of private companies and of state owned corporations is highly dependent on government licenses and government projects of development it is not uncommon that sons and other close relatives of government officials in economic departments receive a better and faster service for their economic enterprises compared to those without connections within the government bureaucracy.

This priority system that favors ascription may give considerable advantages to power holders in government and their Descendants, but it does not bar private individuals from being active in economic development. An individual in a tradition oriented community may rise from rags to riches on his own account, but his economic success and his wealth does not help him much in raising his social status. He has unmistakably shown his achievements on the economic level, but that cannot replace ascription in the social status system. In Yogyakarta and Surakarta, the two traditional principalities in Java where social status is measured with rank and honorary titles in the service of the Suntan's or the Sunan's court, it has happened frequently that well to do Javanese businessmen were delighted to accept a court related job that paid them a fraction of the salary they spent every month on the youngest clerk in their business office.

In such a social system it may perhaps stimulate private entrepreneurs if their success in business be recognized by the government in the form of an honorary title from the hands of the President on the national level and from the hands of the Governor on the regional platform.

The phenomenon of diffuseness in tradition oriented rural communities as compared with specificity in modern urban population groups may be attributed to cultural differences. This shows for instance in the notion of time which differs between the two cultures. In tradition oriented cultures people tend to consider time as having a cyclical movement. The opportunity that one has missed today will no doubt come back again some time in the future. There is also the general attitude that man should control time and not the other way round. It is against

the dignity of man to be or to act in a hurry. Man looks at the rice crop that grows on its own rhythm in which time has no way of interfering. Time has to wait for man as it has for the rice crop. There is no merit in being specific and exact in terms of time when one makes an appointment with others and neither when he has to tend his crop. Nature will show man when and what to do with his crop.

In a community with a strong emphasis on social harmony and stability and individual has to reason more with his feeling rather than with his faculty of rational thinking. But however sharp an individual's feelings it is always more diffused than his rational way of thinking.

Diffuseness in tradition oriented rural communities is also observable in the relationships between individuals, particularly between individuals and their leaders. A leader is supposed to have the ability of giving guidance and advice to his people regarding all problems they might encounter in their life. If he is able to do that to the satisfaction of his people he will be showered with their full confidence on any matter that needs a solution. Once he has reached that state in his relationship with his social environment a leader can virtually do no wrong. Any advice or suggestion he gives is unconditionally accepted as correct until it shows the reverse. But even then the trusted leader will not be blamed. Those responsible for the implementation of the leader's advice or suggestion will be accused of making mistakes.

Looking at urban communities one can immediately observe and feel the specificity that marks the relationships between individuals. In those communities collectivism has made way for individualism. Here every individual is assessed on the basis of his personal qualities and his achievements. Individual interests prevail over communal interests, making relationships with others limited to specific purposes. This specific nature of relationships is clearly expressed in the form of contracts, which are preferably written rather than oral, in which the rights and obligations of each contracting party are formulated in detailed exactness. Unlike the custom in tradition oriented communities of conflict or malpractice of the other party, in contractual relationships it is quite common and even imperative to stipulate what should be done in case of conflict or failure in fulfilling one's obligations.

Specificity in working time and in making decisions is also a part of a modern urban community's culture. Working with machines, competition in business, running a large scale enterprise, and the urge to get ahead of others in the same field necessitate the efficient use of time. In a modern culture time is considered to proceed linearly. An opportunity missed will never return. It has to be grabbed whenever it shows up. This requires fast thinking, fast reacting and fast decision making. Speed and perfect timing are of great importance in modern life. One has to be specific in time.

In such a community that heavily relies on science and technology and believes in planning the future while coordinating a diversity of activities, an individual has to be specific in his language, his goal setting, his planning, his organization, and his timing of every action. Rational and realistic thinking make for specificity in whatever he does. All these factors fit in a modern economy and should be mastered when one has to plan development.

From the social and cultural differences between tradition oriented rural communities and modern urban people one can understand the difference in their responses towards economic development. As anywhere else in the world development means social and cultural changes. Tradition oriented communities by definition resist change because of their commitment to the past and the present. It is especially the older generation as the bearers of tradition that stands firm against social and cultural changes. They are not only the bearers of tradition, but they also constitute the ruling group in the community, which is by its very nature anxious to maintain the social status quo which finds its expression in the communally oriented social system of the community.

If a development agent wants to gain success in his endeavors in a tradition oriented community, the first step he should take is to win the confidence of the older generation in that community and try to have them agree with his plans. With their agreement he will gain the cooperation of the entire community.

Modern urban communities on the other hand are open minded, concerned with the present and the

future, and welcome any social and cultural change which brings them a greater satisfaction in their life without causing social disorganization beyond the community's control.

The New Order government, approving the concepts of development presented by the Bappenas (national development agency) technocrats, decided that national development with the emphasis on the economic sector should become the overriding part of their policies. The government has committed itself so strongly to national development, that in the government sponsored courses on the inalterable Pancasila, national development is interpreted as one of the major ways to actualize that basic philosophy of the state.

The pattern of planned national development in Indonesia is for all purposes more acceptable to modern urban communities rather than to traditional rural populations. Urban communities have responded quickly and favorably to the development plans of the government. Private initiative in many sectors of the economy started to grow in the favorable development climate created by the Five Year Development Plan, the Repelita. It found support in the newly stimulated foreign capital investments which supplemented the relatively weak domestic capital. In that way public and private forces jointly move forward to make development sustainable.

In the rural areas the general response to development efforts was less spontaneous. New projects had to be initiated by the government and the rural population was urged to participate, but only after an extensive program of information and guidance. Being culturally used to obeying orders from the government the population cooperated when ordered. But new development projects were more often than not considered by the population as "government owned" projects and very rarely as people's projects. A government project, people reasoned, is planned, organized, managed and financed by the government, who is entirely responsible for its success or failure. The people assumed the attitude of non-interference, neither favorable nor unfavorable. As said earlier, people will cooperate if ordered to. All information from the government that a specific project was specially designed for the benefit of the people was always politely listened to, but it very seldom ignited enthusiasm.

Only after a specific project is technically and organizationally successful, and only after the people could witness the benefits they could reap, that project would be accepted and eventually continued with people's power. At that point the project would cease as a project and become one of the social institutions of the people. But as long as no benefits for the people can be recognized, a government project will not turn into a people's institution. A few cases may be presented below as illustration.

2. COOPERATIVES

Article 33 of the Indonesian Constitution (usually referred to as the 1945 Constitution for its year of inception) sets the ideal form of the country's economy. It says:

- (1) The economic system is organized as a collective effort on the basis of the family principle.
- (2) The sectors of production which are important for the state and are of significance to the people at large are to be controlled by the state.
- (3) Land and water and natural resources are controlled by the state and are to be used for the highest degree of people's welfare.

In the general elucidation of the Constitution one can find a statement that the most appropriate form for the realization of that article is the cooperative.

This article in the Constitution is widely believed as the brain child of Mohammad Hatta, Sukarno's partner in the proclamation of Indonesia's independence on 17 August 1945. He also had with Sukarno a leading position in the National Committee for the Preparation of Independence, and subsequently became the first Vice President of the republic.

In his speech delivered at an economic conference in Yogyakarta on 3 February 1946 Mohammad Hatta reconfirmed that Indonesia's post war economic development should be based on the ideal system of mutual help or gotong-royong. In that same speech he was more specific and direct when he said that "The economic form to be most suitable to the ideal system of mutual help is the cooperative. The entire economy of the people should be based upon the system of cooperatives." (Sri Edi Swasono 1985: 3-4)

President Suharto in one of his speeches also determined that "Indonesia's economic system is the system of cooperatives.....the fact that we are not using that system at present is only of a temporary nature. But in due time we will fully use the economic system of cooperatives." (Sri Edi Swasono 1985: ii)

Hatta's statement was made only less than six months after the dramatic proclamation of Indonesia's independence. At that moment the whole nation was still engaged in a fight of life and death against the Dutch armed forces and nobody, including Hatta, was sure about the future of the newly proclaimed republic. His statement can therefore be understood as a policy statement for the implementation of article 33 of the Constitution.

Suharto, who became President in 1967 or 22 years after the proclamation of independence, is a stern believer of Pancasila and the 1945 Constitution. His statement shows that he was determined to carry out the message of the Constitution with regard to the system of the national economy. But he also recognized the fact that cooperatives were not yet used as the actual economic system of the country. Even now, after continuous and serious efforts of the Minister for Cooperatives, forty years after Hatta's statement, cooperatives play a very minor role in the national economy. It was said in a seminar on cooperatives in 1986 in Jakarta that less than 3% of GNP could be attributed to cooperatives.

The question is: Why?

The assumption that gotong-royong and the kekeluargaan social system (the social system which is actually an enlargement of the family principle over a wider community) is a logical and natural forerunner of cooperatives seems to require a closer study. Gotong-royong is in fact not an economic institution. It is actually a social institution to maintain social solidarity and good social relations among neighbours, friends and relatives. As such it has a limited social basis. Activities in the process of economic production like preparing land for rice growing, building a house or organizing a wedding party are all used only as an opportunity to have people come together and work together for the joy of being together. The true objective of gotong-royong as an institution of mutual help is social and not economic in nature.

The other type of gotong-royong whereby all male manpower of a village community is mobilized to carry out some collective work under the guidance of the village headman is usually of short duration not exceeding one or at the most two days. In both cases the goals of gotong-royong are traditionally determined and do not involve cash payments of any kind.

Roesli Rahim, Head of the Cooperatives Service of the Ministry of Economic Affairs in the 1950's, seems to have caught the divergence between gotong-royong and cooperative. He wrote:

"This principle of mutual aid, however, prevailing all over Indonesia as appears from such different denomination as "gotong-royong", "tulung tinulung", "sambat sinambat", and "mapolus" is a form of incidental social cooperation, sanctioned by age old customs. It brings the people together on the basis of common spirit; their feeling of social interdependence makes them look for the necessary protection by joining together. But it can only be retained by a closed family economy.

Cooperation, however, is the voluntary and continuous economic organization of independent individuals who endeavor to gain better living conditions by joint activity; its principal activities are typical for modern economic intercourse, the money and commerce economy, where the economic, where the economic subject is highly individualized." (Moh. Hatta 1957: xviii-xix)

Gotong-royong, as can be concluded from the arguments presented above, is part of an economically less developed culture, where as Robert Redfield says;

"Essentially and primarily, man does not aim at safeguarding his individual interest in the acquisition of material possessions, but rather at ensuring social goodwill, social status, social assets. He values possessions primarily as a means to an end." (Robert Redfield 1957: 12)

The cooperative as designed by law No.12/1967 is clearly an economic institution aimed at serving the material and financial interests of its members. While the gotong-royong institution is activated every time for a short time purpose, the cooperative which involves money payments and complicated paper work, which is alien to the average rural farmer, is set up for an unlimited time.

In a gotong-royong group every member knows every other member intimately, whereas in a cooperative of a sufficiently large economic scale members may be strangers to each other. Impersonality in social relationships is something unfamiliar to members of a village community.

The social and cultural differences between gotong-royong and cooperatives, however, does not necessarily lead to the conclusion that there is no ground for cooperatives in Indonesian society. Cooperatives have certainly a good chance of existence under an appropriate development program. As stated so frequently by the Indonesian government the Indonesian economy has three major components, (1) the BUMN or state owned corporations, (2) the private sector, and (3) cooperatives.

The essential difference in conceptual terms between the three economic sectors is in the voting system. In both the BUMN and the private sector the norm one-share-one vote, whereas in cooperatives voting follows the rule of one-member-one-vote. With this voting system it is doubtful whether a cooperative can attract private capital investors to enter into membership.

Probably to show that cooperatives are accepted by the people as the saka-guru or supporting pillar of the Indonesian economy the government has given a strong emphasis since 1970 on quantitative rather than on qualitative results in the implementation of development plans for cooperatives. Under government guidance thousands of KUD's (Kooperasi Unit Desa, or Village Unit Cooperative) have been established all over the country, with many more to come every year. Each individual once served by a KUD is automatically recognized as a member without any obligations on his side. In general a KUD holds an average of 3,000 to 4,000 members, spread over the area of a kecamatan or subdistrict which includes from 10 to 20 villages.

A more detailed description of a KUD in its structure and operation would take too much space in this limited paper. Suffice it to say that the rural population is not yet equipped with proper education, economic experience and administrative skills to run a KUD properly. In the population's view, however, a KUD is considered a government project and not a people's institution at all.

The success of a cooperative movement is also hampered by the fact that BUMN's and private companies run their business in a capitalistic fashion, led by profit motive, using big capital (big to Indonesian standards) and stimulated by the spirit of competition. On the other hand cooperatives have no capital, no experience in business, no experienced managers and not enough knowledge of real market forces. They have to build up themselves literally from scratch. Without the continuous support and protection by the government a KUD has no chance of survival in the present economic climate of competition.

To educate a population without experience and knowledge of modern economy requires time, patience and a great deal of cultural understanding. It might be more beneficial to the cooperative movement if more emphasis would be given to the quality rather than to the quantity of cooperatives. A survey could be made on present cooperatives which show a good organization and management with potentials for success. These cooperatives should be assisted to improve and to grow to become a model for other cooperatives.

There is widespread evidence in the short history of cooperatives in Indonesia that consumption and credit cooperatives can operate with sufficiently good results since they meet the needs of their members. Most of them are small in size and have members who know each other. Management is in the hands of individuals who may not have the tested skills of a good manager, but who enjoy the confidence of the members for their sincerity and honesty. If these kinds of cooperatives can be developed with good guidance of people with experience in cooperative management and without commanding interference of government officials, there is a good chance of success and development.

3. The Bimas Padi Program

Unlike the cooperative movement which is at present still far removed from its final goal the Bimas Padi Program has after four decades of incessant experiments finally reached the state of self sufficiency in national rice production.

The word Bimas is an acronym of "bimbingan massal" or mass guidance, and padi is the Indonesian word for rice. The Bimas Padi Program aims at increased productivity of rice growing.

The initial steps of the program started at the time the country was occupied by Japanese Armed Forces in 1942 - 1945. Urged by their great need for more and more food to feed the war the Japanese occupation forces instructed the rice growing farmers to modernize the technique of rice cultivation by row planting and the use of compost fertilizers. Row planting, in contrast with the traditional haphazard way of planting, requires some discipline from the planting women who were used to enjoy their being together while pushing the rice seedlings into the soft soil rather than to think of what they consider as boring technicalities.

In the nature of a military at war the instructions to the farmers were given with force and severe punishments by the foreign war administration. The farmers reacted unfavorably with passive resistance. They complied to the instructions and practiced row planting, but only on land both sides of what they called inspection roads. On other parcels of land the people marvelled in showing their disagreement by deliberately continuing to do their planting in their traditional ways. Compost fertilizers were also made for exhibition only and never for actual use.

When the Japanese armed forces left the country after their war defeat, the population in some areas vented their cropped up hatred by destroying the row planted rice crops. After sobering up, however, the most rationally minded farmers at their own will and initiative resumed planting their rice in neat rows. When their harvest showed a higher yield than that of others who persisted in their traditional ways, the next planting season saw more farmers doing row planting with similar favorable harvest outcome. After six or seven seasons row planting was firmly institutionalized in most of Java's rural areas. Those who still worked in the traditional way were called stupid and non-conforming.

At the end of the 1950's and the beginning of the 1960's IPB (The Bogor Institute of Agriculture) made experiments to increase rice productivity per unit of land by applying the Panca Usaha or Five Efforts which include irrigation, the use of selected high yielding rice varieties, row planting and the use of manufactured fertilizers and insecticides, the latter only when and wherever needed. Technically the experiments were quite successful. Rice productivity per hectare increased.

When the New Order administration in 1969 embarked on the national development plan it included the Bimas Padi Program on the basis of the IPB's Panca Usaha. Initially introduced in Java the program soon developed into a nationwide program involving millions of farmer families. To help farmers join the program the Bank Rakyat Indonesia (Indonesian People's Bank) as a Government owned enterprise was instructed to extend Bimas loans to the farmers. In actual practice the Bimas Padi Program can be considered an improved Green Revolution project. Rice production rose from 11,000,000 tons in 1970 to 26,000,000 in 1986, converting the country from a heavy rice importer to a self sufficient state of production.

On other levels, however, the program was strongly criticized. Because of inadequate program

information to the farmers the Bimas credits from the bank were accepted by the population in many areas as government aid. When the post-harvest time of repayment arrived, many farmers refused to repay on the argument that their participation in the program was only to follow government instructions. It was also unfair, so they argued, that the government should ask repayment for aid the farmers received for work in a government sponsored program.

In general the rural population recognized the increase in rice productivity and production as a result of the rice program. But they also observed that the program only benefited the land-owning farmers, since credits from the bank were extended only with landright certificates as collateral. Non-landowning farmers were therefore excluded from the program and were banned from sharing in the increased income per capita.

To continue the program the government instructed the bank not to give fresh credits to farmers who failed in their repayments. Caught in between not repaying and not harvesting the increased production through the Bimas Padi Program the farmers gradually and reluctantly made the more promising choice. They paid up credit and interest, received new loans, and could participate again in the program towards greater income.

Having laid the economic and social groundwork in rice production the government is considering to withdraw from involvement and leave it to the people themselves to continue the program.

4. The PIR or NES Projects

Encouraged by the success of the Bimas Padi Program the government has initiated a new project in another sector of agriculture. One of those sectors covers plantations of hard crops like rubber, oil palm, cacao and coconut.

Since the Dutch colonial times large plantations, owned and run by foreign companies, existed side-by-side with small holding plantations, each owned and managed by its individual owner. While the large plantations enjoy a professional management that worked efficiently with modern technologies and earning considerable profits each year, the small holdings are generally poorly managed, have a low productivity, generate low quality products that sell at low prices in the local market and only sometimes find its ways through collecting traders to the international market.

A system is now introduced by the government with partial foreign assistance to help small holders obtain a higher productivity, quality and profitability of products. It is also the government's intention to convert them through the program into effective managers of their own plantation. The system is called PIR for Perkebunan Inti Rakyat or NES for Nucleus Estate and Small holders according to Worldbank terminology.

On the one hand the system recognizes a Nucleus Estate, managed and run by a plantation company (so far owned by the state) and on the other the small holdings owned and run by their individual private owners. Such small holdings may be already in existence before the system started to operate. But it can also be newly created small plantations distributed by the government to interested farmers, some of them are transmigrant farmers from Java. Probably due to biologists in the department of agriculture in charge of organizing the NES the small holdings are called plasma small holdings in the system.

The nucleus estate is charged with functioning as a model of a modern plantation with effective management, appropriate technology, and high productivity of high quality products. At the same time it is expected to train the plasma small holders in the art of management, the use of appropriate technology, and to help them in marketing their products. As is said in the oral instructions the nucleus estate has to play the role of a good father to his children, the plasma small holders, until they can stand on their own feet.

The set up of the NES project is rationally sound and there is hope for good results provided certain informal requirements are met. The first requirement concerns the nucleus estate which has to be a real model in all aspects which can hardly be said of many state owned plantations. Secondly the staff and senior workers should have the skill, if not the experience, to train

small plasma farmers in new plantation technologies and in becoming managers of their own plantation.

The other requirements have to be met by the small farmers. First they have to have an open attitude towards development of themselves and their business. They also have to be willing to learn new technologies, and most important and difficult for new small farmers, they have to be aware of the change from seasonal food production methods for their own consumption to long term plantation systems to serve the wide market.

For a NES project to become successful the nucleus estate should not consider its serious assignment as a simple side job next to its routine work. Those in charge of developing the project should be motivated in training the plasma farmers. They should not only be able to introduce new technologies, but they should be more concerned in changing the work attitude of the plasma farmers to become independent and self sustaining managers.

At the other end the selection of would-be plasma farmers should be conducted to gain success in implementing the NES project, and not -- as has been very frequently done -- to help impoverished subsistence farmers to obtain a better living. In more definite terms the NES projects should be recognized and implemented as economic projects and not as social or charity relief work.

5. The TRI Program

The same intention of the government to help small farmers to develop into effective managers on their own land is displayed in the sugar cane plantations as a part of the sugar industry on the island of Java.

At the time of the Dutch colonial regime the sugar industry was the life belt which kept the Netherlands East Indies economy floating. The sugar industry at that time was owned and run by Dutch private companies with their head office in the Netherlands. It was exclusively located in Java where the soil is fertile, irrigation created no technical problems and labour was cheap and in abundance.

After the Dutch had left Indonesia all sugar mills, together with all Dutch owned assets, were nationalized and converted into state owned mills, operated by state owned enterprises.

A sugar mill as an enterprise consists of two major parts, the factory where sugar cane is processed into sugar and the sugar cane plantation which grows the cane to feed the factory. In the Dutch system, continued after the 1958 nationalization and lasting until 1975, the two parts stood under one management. To grow sugar cane the Dutch management, assisted and protected by the colonial civil administration, hired land from the farmers for the duration of three rice crop seasons equaling sixteen to seventeen months. After one hiring period the sugar mill hired other lots of land, also for three rice crop seasons, leaving the land of the first season to the people for their own indigenous types of agriculture. The farmers, voluntarily or reluctantly, made their land available to the sugar mill for their sugar cane plantation, but were allowed to work as paid labour on their own land.

Because of enduring political instability after nationalization, continuous social unrest, inexperience and incapability of most of the sugar mill managers, and general economic deterioration in the country, productivity of sugar cane plantations and sugar content of the cane steadily decreased to less than 50% of the prewar level.

To increase national sugar production and to make each farmer an independent manager on his own sugar cane plantation the government decided in 1975 to change the plantation system into a TRI program. TRI stands for Tebu Rakyat Intensifikasi or People's Sugar cane Intensification. The program includes the following points:

1. The sugar factory has the duty to process sugar cane into sugar.
2. Sugar cane should be grown by the farmers themselves on their own land.
3. Every year the Minister of Agriculture determines how much land on the island of Java should be reserved for sugar cane cultivation.

4. The factory personnel, having much idle time, is charged with training the farmers to become managers on their own plantation land.

5. To assist the farmer in covering the cost of cane production the Bank Rakyat Indonesia (Indonesian People's Bank, state owned) is assigned to extend credit through the KUD (Koperasi Unit Desa or Village Unit Cooperative) which extracts a fee for its services.

6. Cane seedlings are to be grown by the sugar factory, after experimental failures by the KUD.

7. The KUD coordinates harvesting of sugar cane and its transportation from the field to the factory, all of which is the responsibility of the farmers.

8. The factory processes the sugar cane into sugar and delivers all the products to the BULOG (Badan Urusan Logistik or Agency for Logistic Affairs) as its sole buyer at a price determined by the government.

9. 40% of the price paid by BULOG goes to the factory and 60% to the farmers through the KUD and after repayment of credit and interest to the Bank.

The program was administratively sound, but did not well consider economic, social and cultural factors which are of great influence on the implementation in the field.

The program was expected to become an incentive to the farmers because of their prospect of becoming a manager on their own land. Consequently it was expected that sugar cane production would increase nationally. But instead cane productivity per hectare of land went steadily down, and so did sugar content in the canes. On the other hand cost of production were up and made for increased prices of sugar. Passive resistance from the farmers against participation in the TRI program came to the surface when a research team from Jakarta in 1983 conducted direct and separated interviews with farmers, civil administrators, sugar factory personnel and KUD board members all over Java. Many program errors and grievances were reported, of which a few are mentioned below.

Bank credits, each year to be determined centrally in Jakarta, frequently came after the planting season was over. Late credits did not help in the purchase of cane seedlings and fertilizers and to pay the cost of digging the land for planting, all of which had to be done in the right season. In this respect the KUD which had no experience in handling credit matters for a few thousand farmers were not able in rendering effective services.

Javanese farmers, living in very densely populated rural areas, are generally known as petty farmers owning small land holdings of less than one third of a hectare per family. To become economically efficient sugar cane planting technologies require much larger land pieces of at least ten hectares each. Only farmers with enough capital to rent large areas of land could profitably participate in the program. The small farmers simply left their land to earn a living somewhere else, mostly as unskilled laborers, and returned at harvest time to cash whatever share of the sugar price paid by BULOG was due to them. While they are away from their land they fully entrust their work and duties on their land to the foreman of the Kelompok Tani or farmers' group to which each farmer belongs.

What was most disagreeable to the farmers was the sugar price determined by the government and paid by BULOG, which was 40% below the open market price in 1983. In their uncomplicated way of reasoning the farmers were aware that they had to buy their own sugar in the open market at a much higher price than they had been paid for by BULOG. To avoid further discontent many farmers decided "to take a vacation" after the last sugar cane harvest.

The report of the research team was submitted to the government in Jakarta and was favorably responded to. Some of the major disrupting features in the program were corrected and the people's grievances taken into consideration.

CONCLUDING REMARKS

The three cases of rural development presented here show with clear evidence that economic development programs to become effective and beneficial to the rural population should integrate economic, social and cultural factors. If planned only on the basis of economic con-

siderations and without due understanding of social and cultural implications, the program is likely to cause social discontent, which may led to social nonparticipation, if not resistance. The end result may be failure of the whole program.

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CHAPTER XVIII
STATISTICAL NOTES

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I. INTRODUCTION

The Indonesian government and related organizations have rapidly developed and improved their statistical system in the past twenty years. In general, the official statistics of Indonesia are centralized in the Central Bureau of Statistics (CBS), which periodically publishes a lot of statistics, including regional ones. In this chapter, we restrict our attention to economic and related statistics.

While detailed statistics are available in the individual publication, brief results can be found in "Statistik Indonesia -- Statistical Year Book of Indonesia" (1) and "Indikator Ekonomi - Monthly Statistical Bulletin" (2), while "Indonesian Financial Statistics" (3), published by Bank Indonesia, is another good source of statistics especially in the financial and monetary field. Indices and explanatory notes of these three publications are given in both Indonesian and English.

(1) covers a wide range of social and economic fields, as listed in Appendix 1 at the end of this chapter.

(2) contains mainly economic statistics, including monthly figures of prices, banking, import and export and production of some important goods including oil & LNG, nine major minerals and estate crops. Production of manufactured goods and data on housing, etc. are available quarterly, while government expenditure, revenue receipt, etc. half-yearly.

(3) contains more details of monetary, financial and balance of payments data. Balance of payments and balance sheets of banks classified into those of Bank Indonesia, several other kinds of banks, and the consolidated monetary authority are monthly published in (3).

Bank Indonesia also publishes "Laporan Mingguan - Weekly Report" (4), which contains quick estimates of most of the above figures including weekly figures of some items.

The Indonesian government makes a lot of effort to compile regional statistics because of the nature of this country, which has a very large territory and a wide diversity of social economic aspects. Regional, mainly provincial, figures are contained in many kinds of statistics, including those on national income, but sometimes the regional figures are not consistent with the national ones.

Besides the publications by CBS, other departments and organizations of the Indonesian government publish various statistics which are compiled mainly from their administrative records, but many of them are written only in Indonesian.

II. NATIONAL INCOME

The base year of the national income statistics of Indonesia (5) was revised in 1985 from 1973 to 1983. At the same time, items were redefined in line with the New System of National Accounts of the United Nations, and the new figures are consistent with those of the input-output table. The method of estimation is also improved a lot: for instance, some figures are estimated by the commodity flow method, and the double deflation method is adopted for estimating some important deflators, including that of agriculture.

GDP by industrial origin is disaggregated into 11 major industrial sectors and 14 subsectors, but factor incomes, for example, income from employment, profit, etc. are not compiled. Expenditure on GDP is divided into private consumption, government consumption, gross domestic fixed capital formation, change in stock, export and import.

Private consumption is estimated based on the National Economic Social Survey (SUSENAS), and change in stock is newly estimated as a residual between GDP by industrial origin and the expenditure on GDP in the new 1983 base national income statistics; private consumption was estimated as a residual in the 1973 base statistics. The credibility of the data of private consumption, which is the biggest component of GDP, is drastically improved because the old figures of private consumption include change in stock and the statistical discrepancy between GDP and expenditure on GDP (GDE) besides consumption.

Gross fixed capital formation is not divided into those of the government and the private sector, so only aggregated figures are available. Fortunately, details of the government account, which are consistent with the national income statistics and contain the figures of government fixed capital formation, have been estimated for the period from 1975 to 1982 and are published by CBS as "Neraca Sektor Pemerintahan Umum Indonesia" (6), so the figures of private fixed capital formation can be calculated by subtracting these figures from those of gross fixed capital formation in the national income statistics.

It is inconvenient for time-series analysis that the new series of national income statistics, which are not continuous with old ones, are published only for 1983 and after. The figures of national income and related items in the "Data for the BAPPENAS Core Model MD83V1" in Appendix 2-1 at the end of this chapter consist of the officially published figures for 1983 and after, figures from 1978 to 1982 which were estimated by CBS for internal use, and figures from 1971 to 1977 which were tentatively estimated for the BAPPENAS Core Model MD83V1. Thus it should be noted that the figures for years before 1983 are not the officially published data. (For the convenience, the data used for Core Model-81 are also given in Appendix 2-2.)

The figures up to 1977 are estimated as follows.

(1) The values of input-output table are used as benchmarks.

(2) The values of the years between the benchmark years are interpolated by use of the adjusted rates of increase of the old series.

The figures of government fixed capital formation of the years from 1971 to 1974 and after 1984, which are out of range of (6), are compiled from the financial data by a simplified method.

The relative prices of GDP components of the new series of national income statistics differ greatly from those of the old series, because there were two oil crises in the period between the two base years of 1973 and 1983. Therefore, the share of each GDP component drastically changes in real terms. For example, the value of CPR/GDPR in the old series in 1983 is 95.8, which is startlingly higher than the 63.9 of the new series for the same year; but the difference in the nominal values of CP/GDP between the 72.2 of the old series and the 63.9 of the new is less marked.

The meaning of this deviation in real terms is that the Indonesian people would have to spend 96% of their GDP in order to maintain their standard of living if all prices were fixed at the 1973 levels, whereas they actually spent only 60 - 70% of GDP. The change of the relative price between private consumption and GDP is caused mainly by the change of export price. It shows how greatly the improvement in the terms of trade of Indonesia, an oil-exporting country, contributed to the improvement of the standard of living of its people.

The real figures are affected a lot by the change of relative prices, so it is not surprising that the growth rates of GDPR substantially differ in some years between the new series and the old.

Both the new series and the old series of 1983 are officially published.

CBS has also compiled the figures of GDP and related items for 27 provinces (7).

III. INDUSTRIES

1. Agriculture

Agricultural production in Indonesia is classified roughly into two major parts: the production of rice, potatoes and beans; and the production of estate crops.

Every year CBS surveys rice, potato and bean production and publishes its findings in "Struktur Ongkos Usaha Tani Padi dan Palawija -- Cost Structure of Farms Paddy and Palawija" (8). This contains provincial figures of value and quantity of production, value and production per unit area, and a detailed cost structure (seed, pesticide, fertilizer, wages, rent etc.). The Indonesian government controls the dealing of rice in the market in order to keep the

supply of rice steady. "Statistik BULOG" Badan Urusan Logistik (BULOG) (9) is important on this subject.

CBS also conducts a yearly survey on the production of large-scale estates and publishes its findings in "Statistik Perkebuna Besar" (10).

In addition, CBS conducted agricultural censuses in 1983 and 1984 and published detailed data on various fields including fishery and forestry (11). The terms of trade for farmers (12), which consists of indices of prices received and paid by farmers, including both the costs of household consumption and production are published monthly in (2).

2. Manufacturing

Since the industrial census of 1974, CBS has published "Industrial Statistics" (13) annually, giving the results of a survey on the production and the cost structure of all large and medium-scale manufacturing establishments (employing 20 persons or more). It adopts five-digit classification which is based on the ISIC four-digit classification and has a further classification make it better suited to local conditions. It contains detailed figures of input-output structure of each industry in five-digit classification and three- and two-digit aggregated industry groups, such as number of establishments, persons engaged, value of production including details by commodity, value of sales, purchase of raw materials with details by commodity, purchase of equipment and services, value added, indirect taxes and so on. Purchase of raw materials and equipment further are divided into local products and imports.

A similar survey on small-scale manufacturing establishments was carried out in 1979.

3. Mining

"Statistik Pertambangan Indonesia" (14), published by CBS, and "Petroleum and Natural Gas Industry of Indonesia" (15), published by the Department of Mining and Energy (MIGAS), are important in the field of mining.

(14) is published yearly in two parts. Part 1 gives statistics on oil and natural gas, and Part 2 covers the non-oil mining sector. These statistics also contain detailed figures of the cost structure.

Given the importance of oil and LNG in the Indonesian economy, data on oil and LNG are very important. On this subject, the monthly publication is most credible and officially used. Monthly figures of production, export, import, domestic sales and consumption of oil and LNG are contained in (15). The amounts of domestic refinery products and of processing deal, which means the processing of Indonesian crude oil at the refineries in Singapore, are also available in (15), as well as very detailed figures on production of oil and LNG, broken down by company and well.

4. Services and others

"Energy Statistics" (16) is published every year by CBS, and deals with the production and supply of electricity. In the field of transportation, CBS publishes some statistics specified to several means of transport, tourism, hotels, restaurants, entertainment services, health services and so on.

5. Input-Output Table

The Input-output table of Indonesia (17) has been compiled by CBS four times, in 1971, 1975, 1980 and 1983. The input-output table of 1983 consists of a basic table of 170 * 170 sectors, an aggregated table of 66 * 66 sectors and another of 19 * 19 sectors.

As mentioned above, the new series of 1983 base national income statistics are consistent with this input-output table.

IV. EXPORT, IMPORT AND BALANCE OF PAYMENTS

Every year CBS publishes "Export and Import Statistics" (18) which are compiled from customs declarations data. It contains detailed figures of exports and imports in net weight and value (export in F.O.B. and import in C.I.F.) compiled according to the CCCN seven-digit classification and the SITC seven-digit classification. Aggregated figures of the CCCN two-digit classification are contained in (19). Exports are classified by commodity, country of destination, province and port of exportation, while imports are classified by commodity, country of origin, province and port of importation. Summary results of (18) and monthly figures are contained in (2) and (3).

The classification adopted in (18) was changed from the BTN classification to the CCCN and SITC classification in 1973 for imports and in 1975 for exports. In the year when the new classification was adopted, figures were published in both the new and the old classifications. However, it is not easy for a user to convert figures from the old classification to the new one because of the enormous amount of data.

Balance of payments statistics (19) are published monthly by Bank Indonesia in (3). The figures on exports and imports are in F.O.B., following the usual description of balance of payments statistics. Besides the total figures, figures on oil/LNG companies are compiled for exports, imports and investment incomes. Transaction of services is divided into transportation and travel, investment income, government and other services, but only the net figures are contained. Gross figures of services can be got from "International Financial Statistics", published by IMF. Figures on exports of principal commodities excluding oil and LNG, imports of principal commodities and imports classified by the type of financing, for example, foreign aid, are contained in (19).

Some items are given special treatment in the compilation of statistics on exports and imports. These include exports and imports of oil, especially processing deals, some off-shore transactions, Garuda's overseas purchase, and some purchases by the government, for example, imports of rice by BULOG. Users of the statistics must be aware that the treatment differs between export and import statistics, balance of payments statistics and national income statistics.

Wholesale price indices of export and import commodities are compiled monthly by CBS in (2). These indices are used as a basis for the calculation of export and import deflators in the national income statistics. However, there are some problems in using these indices as export and import price indices. One problem is the limited coverage of these indices, which are calculated based on prices of representative commodities. Another important problem is that these price indices do not represent the stage of the actual transaction of exports and imports or the customs clearance but the wholesale stage.

Exports and imports statistics contain figures on net weight and value of each commodity, so the unit value of each commodity can easily be calculated. If there were the price indices calculated based on the unit prices, these would be appropriate for use as exports and imports price indices. Unfortunately such indices are not compiled, and it is not easy for a user of the statistics to calculate such indices based on the very large amount of data of the CCCN or the SITC seven-digit classification.

The figures of export and import price indices for the BAPPENAS Core Model MD83V1 are calculated from the unit value of the SITC two-digit commodities. Although this method calculation may be too imprecise, it was adopted because of a lack of manpower and computing facilities.

V. PRICES

Consumer price indices (20) and wholesale price indices (21) are compiled monthly by CBS in (2). (20), classified into food, housing, clothing and miscellaneous components, are calculated based on the prices of 120 to 150 goods and services consumed by households in 17 capital

cities. Indices of each of these 17 cities are published besides the general index of Indonesia. In addition, consumer price indices of another 10 cities are also contained in (2). The series of consumer price indices was introduced in 1978. The Jakarta cost of living index covering 62 goods and services was used to measure cost of living trends in Indonesia up to 1978.

Wholesale price indices are compiled from the prices of 241 items and classified into the sectorial indices of agriculture, mining and manufacture. As mentioned in the previous section, wholesale price indices of export and import goods are also compiled and wholesale price indices classified into those excluding export goods, those excluding import goods, those excluding export and import good, etc. are available.

Wholesale price indices of construction materials (22), which are classified by the type of construction, for instance, residential buildings, non residential buildings, and public works, constitute another series of wholesale price indices.

The terms of trade for farmers (12) are contained in (2), as mentioned in section III, as are the price indices of nine essential commodities including rice in the rural market (23). The price paid by BULOG for its purchase of rice is also important in connection with the rice price. This is available in (9).

Besides the above mentioned indices, occasional surveys have been carried out on the prices of certain commodities or in certain specified districts.

VI. POPULATION, LABOUR FORCE, EMPLOYMENT AND WAGES

Three population censuses (24) have hitherto been conducted, in 1961, 1971 and 1980, together with several intercensus surveys on population. The results are shown in the table below.

Besides these figures, interpolative estimations of population for the intervening years and the projections of future population are officially made by CBS. The results are contained in (1).

Population Based on the Censuses and Intercensus Surveys
(Unit : 1,000 persons)

1. Census Population, October 1961	97,085
2. Susenas, November 1964 - February 1965	97,634
3. Census population, September 1971	119,208
4. Supas, March 1976	126,093
5. SAKERNAS, September-December 1976	127,480
6. SAKERNAS, 1977	
Average 1977	129,768
7. SAKERNAS, 1978	
Average 1978	134,231
8. Census Population, October 1980	146,776

After the 1980 census, a large survey was carried out on labour forces and employees, and the results are published by CBS in "Labor/Employees Situation in Indonesia 1982" and "Labor Force Situation in Indonesia" (25). The size of labour forces, which is divided according to the type of main occupation, number of employees and unemployed persons classified by age group and province, are contained in (25).

Concerning the condition of the labour market, the number of registered applicants for work and the demand for workers from other sources are also available in (1).

The data on population used for the BAPPENAS Core Model are the above estimates by CBS with some modification. Time-series of labour force and employment are also estimated by a similar interpolative method.

Time-series of the general average wage are not available in Indonesia, but the figures of wage of estate workers are contained in (1). (1) (originally (10)) also contains figures on employment costs of manufacturing establishments. Employment cost per head can be easily calculated by dividing these figures by number of employees from the same source. These data may be used as representative wages when the assumption of the relatively high mobility of labour in Indonesia is needed for an analysis.

Employment costs per head of large/medium manufacturing establishments are used as the wage data for the BAPPENAS Core Model MD83V1.

VII. CONCLUDING REMARKS

The quality and quantity of the statistics in Indonesia is not unsatisfactory. Indonesia has substantial regional statistics, and it is so convenient that most of the statistics are centralized in the CBS. However, there are some statistics that are edited in a way that renders them inconvenient or even impossible to use. Some statistics also do not give enough consideration to the use of time-series analysis.

Data on capital stock are not available in Indonesia, as in many other countries. The figures on capital stock used in the BAPPENAS Core Model MD83V1 are estimated very simply on the assumption that the ratio of the amount of investment to the increase of output is equivalent to the capital output ratio in the initial period.

It is hoped that capital stock statistics will be rapidly developed, because supply-side analysis is especially important in developing countries. From this point of view, the time-series of labour force and employment are not satisfactory. It is also desirable that the figures on fixed capital formation in the national income statistics be divided into those of government, housing and equipment for production.

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- (2) "Indikator Ekonomi -- Monthly Statistical Bulletin", CBS.
- (3) "Indonesian Financial Statistics", Bank Indonesia.
- (4) "Laporan Mingguan -- Weekly Report", Bank Indonesia.
- (5) "National Income of Indonesia", CBS.
- (6) "Neraca Sektor Pemerintahan Umum Indonesia", CBS.
- (7) "Provincial Income in Indonesia 1978 - 1983", CBS.
- (8) "Struktur Ongkos Usaha Tani Padi dan Palawija -- Cost Structure of Farms Paddy and Palawija", CBS.
- (9) "Statistik BULOG", BULOG.
- (10) "Statistik Perkebuna Besar", CBS.
- (11) "Agricultural Census 1983" and the related publications, CBS.
- (12) Index numbers of price received and paid by farmers, farmers terms of trade, contained in (2), CBS.
- (13) "Statistik Industri", CBS.
- (14) "Statistik Pertambangan Indonesia", CBS.
- (15) "Petroleum and Natural Gas Industry of Indonesia", Department of Mining and Energy.
- (16) "Energy Statistics", CBS.
- (17) "Table Input Output Indonesia", CBS.

- (18) "Expor", "Impor" -- Indonesian foreign trade statistics, CBS.
- (19) Balance of Payments, contained in (3).
- (20) Consumer price index, contained in (2).
- (21) Wholesale price index, contained in (2).
- (22) Wholesale price index of construction materials, contained in (2).
- (23) Price indexes of 9 essential commodities in the rural market, contained in (2).
- (24) Population census and related publications, CBS.
- (25) "Labor/Employees Situation in Indonesia 1982" and "Labor Force Situation in Indonesia", CBS.

APPENDIX 1

Contents of "STATISTIK INDONESIA 1985"

Kata Pengantar	Preface
Daftar Isi	Contents
Daftar gambar	List of Figures
Daftar Tabel-tabel	List of Tables
Penjelasan Umum	Explanatory Notes
Struktur Organisasi Biro Pusat Statistik	Organization Structure of the Central Bureau of Statistics
1. Geografi	Geography
2. Iklim	Climate
2.1. Musim	Seasons
2.2. Suhu dan kelembaban udara	Temperature and Humidity
2.3. Curah hujan dan Arus angin	Rainfall and Surface Winds
3. Penduduk dan Angkatan Kerja	Population and Labor Force
3.1. Jumlah penduduk, laju pertumbuhan, dan kepadatan	Population Size, Growth, and Density
3.2. Demografi	Demography
3.3. Angkatan kerja	Labor Force
3.4. Perpindahan penduduk	Population Mobility
4. Sosial	Social
4.1. Pendidikan dan Kebudayaan	Education and Culture
4.2. Kesehatan	Health
4.3. Keamanan dan ketertiban masyarakat	Public Order and Safety
4.4. Agama	Religion
4.5. Sosial lainnya	Other Social
5. Pertanian	Agriculture
5.1. Penggunaan Tanah	The Utilization of Land
5.2. Tanaman Pangan	Food Crops
5.3. Perkebunan	Plantation
5.3.1. Perkebunan besar	Estates
5.3.2. Perkebunan rakyat	Smallholders
5.4. Kehutanan	Forestry
5.5. Peternakan	Animal Husbandry
5.6. Perikanan	Fishery
6. Perindustrian, Pertambangan, Energi, dan Konstruksi	Manufacturing, Mining, Energy and Construction

6.1. Perindustrian	Manufacturing
6.2. Pertambangan	Mining
6.3. Listrik, Gas, dan Air Minum	Electricity, Gas and Water Supply
6.4. Konstruksi	Construction
7. Perdagangan Luar Negeri	Foreign Trade
7.1. Perkembangan Ekspor dan Impor	Trends of Exports and Imports
7.2. Ekspor Minyak Bumi dan Gas	Exports of Oil and Gas
7.3. Ekspor tanpa Minyak Bumi dan Gas	Exports of Non-Oil-and-Gas
7.4. Ekspor menurut Negara Tujuan	Exports by Country of Destination
7.5. Impor menurut Negara Asal	Imports by Country of Origin
7.6. Impor menurut Golongan barang Ekonomi	Imports by Broad Economic Categories
8. Transportasi dan komunikasi	Transportation and Communication
8.1. Panjang Jalan	Length of Roads
8.2. Angkutan Darat	Land Transportation
8.3. Angkutan Udara	Air Transportation
8.4. Angkutan Laut	Sea Transportation
8.5. Pos dan Giro	Mail and Postal Services
8.6. Perhotelan dan Pariwisata	Hotel and Tourism
9. Keuangan dan Harga-harga	Finance and Prices
9.1. Keuangan Negara	Public Finance
9.2. Perbankan	Banking
9.3. Perasuransian	Insurance
9.4. Harga-harga	Prices
10. Konsumsi dan Pengeluaran Penduduk	Consumption and Expenditure
10.1. Persediaan Konsumsi Nutrisi per Kapita	Availability of Nutrient Consumption
10.2. Pengeluaran Penduduk	Expenditure
11. Pendapatan Nasional dan Regional	National and Regional Income
11.1. Produk Domestik Bruto	Gross Domestic Products
11.2. Produk Domestik Regional Bruto	Gross Domestic Regional Products
12. Perbandingan Internasional	International Comparison

APPENDIX 2-1

 DATA for the BAPPENAS Core Model MD83V1

List of Variable Names (# Exogenous Variable)
 (Real = 1983 constant price)

ACBKL : Accumulated Net Inflow of Long-Term Capital
 (Balance of Payment: B.P.)
 ACBKLP : Accumulated Net Inflow of Private Long-Term Capital
 (Balance of Payment: B.P.)
 AIDERR : Foreign Aid & Discrepancy (in Rp.)
 (CG + IG + SB + PREDB - TXTTL)
 BBS : Basic Balance (B. P.)
 BCR : Current Balance (B. P.)
 BKLO #: Net Inflow of Official Long-Term Capital (B. P.)
 BKLP : Net Inflow of Private Long-Term Capital (B. P.)
 BKLPR : Real Net Inflow of Private Long-Term Capital (B. P.)
 CG #: Government Consumption (nominal)
 CGR : Government Consumption (real)
 CP : Private Consumption (nominal)
 CPR : Private Consumption (real)
 DEP : Depreciation (nominal)
 DEPPR : Private Depreciation (real)
 DEPR : Depreciation (real)
 DUMNFIAD : Dummy Variable to Adjust for the Difference in NFIA (in US\$)
 between B. P. and NI (National Income Statistics)
 EMP : Employment
 GDP : Gross Domestic Product (nominal)
 GDPR : Gross Domestic Product (real)
 GDPRPT : Potential GDP
 GNP : Gross National Product (nominal)
 GNPR : Gross National Product (real)
 IG #: Government Investment (nominal)
 IGR : Government Investment (real)
 IP : Private Investment (nominal)
 IPR : Private Investment (real)
 J #: Inventory (nominal)
 JR #: Inventory (real)
 KPR : Private Capital Stock (real)
 KR : Capital Stock (real)
 LABF : Labour Force
 M : Import (nominal)
 MBPD : Import (B. P., in US\$)
 MR : Import (real)
 MRMFD : Real Import of Manufactured Goods excl. Machinery & Transport
 (in US\$)
 MRMTD : Real Import of Machinery & Transport (in US\$)
 MROGD #: Real Import of Oil, Gas & the Related Products (in US\$)

MRFMD : Real Import of Primary Goods excl. Rice & Oil/Gas (in US\$)
MRRICED #: Real Import of Rice (in US\$)
MRSNETD : Real Import of Net Service (in US\$)
MWR : World Import (real)
N #: Population
NFIA : Net Factor Income from Abroad (nominal)
NFIAD : Net Factor Income from Abroad in US\$ (nominal)
NFIAR : Net Factor Income from Abroad (real)
NNP : Net National Product (nominal)
PCG : Deflator of Government Consumption
PCP : Deflator of Private Consumption
PCPI : Consumer Price Index
PDROL : Domestic Price of Oil
PFDD : Deflator of Final Domestic Demand
PGDP : Deflator of GDP
PI : Deflator of Investment
PM : Deflator of Import
FMMFD #: Deflator of MRFMD
FMMTD #: Deflator of MRMTD
FMOGD #: Deflator of MROGD
FMPMD #: Deflator of MRFMD
FMRICED #: Deflator of MRRICED
PX : Deflator of Export
PXGAS #: Deflator of Gas Export
PXM : Deflator of XRMFMD
PXOIL #: Export Price of Oil
PXPM : Deflator of XRFMD
PWX #: Price Index of World Export
QDROL : Quantity of Refinery Oil Products for Domestic Consumption
QXGAS #: Quantity of Gas Export
QXOIL : Quantity of Oil Export
RFEX #: Foreign Exchange Rate
RPEDB #: Repayment of External Debt (in RP.)
RTBUS #: US T. B. Rate
SB #: Subsidy (nominal)
SMB #: Money Supply (broad money: M2)
TI : Indirect Tax
TIME #: Time (1971=1, 1972=2,...)
TXNOL : Non-oil Non-gas Tax
TXOL : Oil Gas Tax
TXTTL : Tax Total
UNEM : Unemployment
W : Wage
X : Export (nominal)
XBPD : Export (B.P., in US\$)
XGASD : Gas Export in US\$
XOILD : Oil Export in US\$
XR : Export (real)
XRMFD : Real Export of Manufactured Goods (in US\$)
XRFMD : Real Export of Primary Goods (in US\$)

List of Data for MD83V1

YEAR	ACBKL	ACBKLP	AIDERR	BBS	BCR	BKLO
71	1258.0000	323.0000	156.6000	10.5000	-456.6000	311.0000
72	2063.0000	750.0000	155.3000	363.4000	-471.7000	378.0000
73	3117.0000	1248.0000	260.8000	249.5000	-804.6000	556.0000
74	4095.0000	1630.0000	160.4000	1004.2000	26.2000	596.0000
75	4380.0000	137.0000	572.6000	-878.5000	-1163.7000	1778.0000
76	6249.0000	374.0000	883.7000	918.5000	-950.6000	1632.0000
77	7574.0000	302.0000	884.9000	1253.5000	-71.6000	1397.0000
78	9398.0000	635.0000	1169.6000	390.3000	-1433.8000	1491.0000
79	10512.0000	24.0000	1523.7000	2130.2000	952.2000	1725.0000
80	12086.0000	-606.0000	1944.5000	4393.2000	2754.2000	2204.0000
81	14197.0000	-458.0000	2433.6000	1674.4000	-498.7000	1963.0000
82	19953.0000	1181.0000	3295.0000	335.6000	-5420.5000	4117.0000
83	26555.0000	3007.0000	3128.2000	160.1000	-6442.0000	4776.0000
84	30177.0000	3764.0000	4445.1000	1652.6000	-1969.5000	2865.0000
85	31984.0000	3832.0000	.....	-142.7000	-1949.9000	1739.0000

YEAR	BKLP	C	CG	CGR	CP	CPR
71	156.0000	3500.8000	323.2000	2133.3000	3177.6000	19872.4000
72	427.0000	3959.4000	395.4000	2325.9000	3564.0000	20284.6000
73	498.0000	5558.6000	514.1000	2232.3000	5044.5000	21970.8000
74	382.0000	8251.5000	755.1000	2499.5000	7496.4000	24466.1000
75	-1493.0000	9942.5000	1359.3000	3934.3000	8583.2000	24404.9000
76	237.0000	12085.2000	1681.5000	4117.3000	10403.7000	26378.6000
77	-72.0000	14379.3000	2058.8000	4495.2000	12320.5000	27519.5000
78	333.0000	17682.0000	2556.5000	5128.4000	15125.5000	29851.1000
79	-611.0000	22793.6000	3277.3000	5743.6000	19516.3000	32489.3000
80	-630.0000	30742.6000	5147.7000	6873.7000	25594.9000	36039.0000
81	148.0000	38745.7000	6452.0000	7550.6000	32293.7000	39697.2000
82	1639.0000	45152.4000	7228.7000	8230.3000	37923.7000	42170.2000
83	1826.0000	52816.6000	8077.3000	8077.3000	44739.3000	44739.3000
84	757.0000	60321.0000	9220.2000	8412.6000	51100.8000	46791.3000
85	68.0000	51.0000	10893.1000	8975.1000	56857.9000	48040.9000

YEAR	CR	DEP	DEPPR	DEPR	EMP	GDP
71	22005.7000	227.8000	1043.0000	1401.0000	39210.0000	4365.8000
72	22610.5000	274.4000	1018.5000	1359.8000	40362.0000	5338.8000
73	24203.1000	380.5000	1182.0000	1565.8000	41562.0000	7520.5000
74	26965.6000	595.0000	1483.9000	1961.8000	42814.0000	11949.5000
75	28339.2000	681.0000	1355.3000	1797.8000	44197.0000	13936.4000
76	30495.9000	841.9000	1405.6000	1890.2000	45476.0000	16909.6000
77	32014.7000	1038.2000	1644.5000	2262.9000	46896.0000	20468.8000
78	34979.4000	1252.5000	1832.8000	2573.5000	48379.0000	24245.7000
79	38232.9000	1832.2000	2085.1000	2958.5000	49929.0000	34840.1000
80	42912.7000	2617.8000	2722.1000	3874.8000	51553.0000	48913.6000
81	47247.8000	3036.0000	2607.9000	3793.1000	53245.0000	58127.9000
82	50400.5000	3181.9000	2574.9000	3768.7000	53917.0000	62475.7000
83	52816.6000	3658.5000	2478.1000	3658.5000	55039.0000	73697.7000
84	55203.9000	4345.4000	2629.4000	3882.7000	57536.0000	87535.5000
85	57016.0000	4768.9000	2656.3000	3955.4000	57990.0000	94491.5000

YEAR	GDP	GDP	GNP	GNPR	I	IG
71	36370.6000	40465.7000	4287.5000	35875.1000	937.4000	202.4000
72	40328.8000	43058.7000	5179.4000	39407.5000	1275.9000	254.9000
73	44383.0000	45930.9000	7274.8000	43269.8000	1644.7000	381.1000
74	47875.1000	48752.6000	11451.1000	46161.9000	2217.6000	591.2000
75	49094.2000	51423.7000	13380.7000	47335.2000	2845.9000	977.3000
76	53138.5000	54112.5000	16427.0000	51715.0000	3620.9000	1513.4000
77	56870.2000	56893.0000	19790.3000	54964.8000	4412.1000	1774.2000
78	58123.4000	60155.0000	23378.8000	55888.6000	5494.1000	1919.5000
79	61473.3000	63977.3000	33355.4000	58876.9000	7667.8000	2409.0000
80	66799.4000	67828.8000	47002.5000	63925.7000	10549.8000	4300.3000
81	71534.8000	72676.8000	56197.3000	68798.8000	14134.5000	4861.1000
82	71297.1000	78237.9000	60496.1000	68647.8000	15822.4000	5725.4000
83	73697.7000	83737.8000	70338.0000	70338.1000	18973.8000	6141.2000
84	78213.8000	88693.2000	83369.3000	74539.6000	19805.9000	7474.4000
85	79910.8000	.....	92389.3000	76603.1000	19618.3000	9521.0000

YEAR	IGR	IP	IPR	IR	J
71	1244,8000	735,0000	4520,3000	5765,1000	68,3000
72	1263,1000	1021,0000	5059,5000	6322,6000	94,0000
73	1568,3000	1263,6000	5200,0000	6768,3000	119,8000
74	1949,2000	1626,4000	5362,4000	7311,6000	145,5000
75	2580,0000	1868,6000	4932,9000	7512,9000	171,2000
76	3397,8000	2107,5000	4731,7000	8129,5000	275,1000
77	3867,0000	2637,9000	5749,6000	9616,6000	379,1000
78	3943,9000	3574,6000	7344,6000	11289,5000	483,0000
79	3889,9000	5258,8000	8491,5000	12381,4000	1977,2000
80	6365,2000	6249,5000	9250,3000	15615,5000	1344,6000
81	6073,3000	9273,4000	11586,0000	17659,3000	2880,6000
82	6781,2000	10097,0000	11959,1000	18740,3000	1247,8000
83	6141,2000	12832,6000	12832,6000	18973,8000	2694,6000
84	6785,7000	12331,5000	11195,1000	17980,8000	4144,7000
85	8137,6000	10097,3000	8360,5000	16768,1000	5288,6000

YEAR	JR	KPR	KR	LABF	M
71	427,1000	37674,0000	50336,5000	41261,0000	711,1000
72	535,0000	41715,0000	55259,3000	42771,0000	829,7000
73	521,8000	45733,0000	60461,8000	44337,0000	1319,7000
74	474,9000	49611,5000	65811,6000	45959,0000	2126,4000
75	486,8000	53189,1000	71526,7000	47641,0000	2369,5000
76	697,5000	56515,1000	77766,0000	49385,0000	3150,2000
77	846,8000	60620,2000	85119,7000	51193,0000	3655,2000
78	-205,0000	66132,5000	93835,2000	53066,0000	4729,9000
79	-404,8000	72539,3000	103258,5000	55008,0000	7746,0000
80	-3045,3000	79068,0000	114999,7000	57022,0000	9885,6000
81	5061,0000	88045,5000	128865,3000	59109,0000	14034,4000
82	2802,6000	97429,7000	143836,9000	61272,0000	15071,4000
83	2694,6000	107784,0000	159152,0000	63515,0000	21235,1000
84	1892,7000	116349,0000	173250,3000	65839,0000	20287,9000
85	4207,4000	124422,0000	186484,4000	68249,0000	19837,5000

YEAR	MBPD	MR	MMFD	MRMTD	MROGD	MRPMD
71	1226,0000	4500,6000	.....	.....	.....	.....
72	1445,0000	4796,0000	.....	.....	.....	.....
73	2664,0000	5979,6000	2926,0000	3186,0000	467,0000	408,0000
74	4632,0000	7309,7000	3098,0000	3107,0000	604,0000	489,0000
75	5468,0000	7500,8000	2940,0000	3243,0000	783,0000	594,0000
76	6819,0000	9292,6000	3010,0000	3453,0000	1159,0000	844,0000
77	7473,0000	10264,5000	2885,0000	3422,0000	1989,0000	767,0000
78	8382,0000	12193,6000	3388,0000	3653,0000	1441,0000	1182,0000
79	9946,0000	13546,7000	3383,0000	3229,0000	1835,0000	1134,0000
80	13456,0000	14865,6000	3847,0000	4659,0000	2490,0000	1370,0000
81	16542,0000	19890,0000	4865,0000	5449,0000	1903,0000	1787,0000
82	17854,0000	20170,5000	5095,0000	6281,0000	3459,0000	1797,0000
83	17726,0000	21235,1000	4668,0000	5684,0000	4145,0000	1471,0000
84	15047,0000	17887,4000	4398,0000	5364,0000	3331,0000	1630,0000
85	12705,0000	16995,8000	4070,0000	3747,0000	1715,0000	1953,0000

YEAR	MRRICED	MRSNETD	MWR	N	NFIA	NFIAR
71	.....	928,3000	446,5200	120429,0000	-78,3000	-495,5000
72	.....	1055,3000	486,5500	123224,0000	-159,4000	-921,3000
73	612,0000	1046,4000	544,9000	126083,0000	-245,7000	-1113,2000
74	372,0000	1405,8000	565,1360	129008,0000	-498,0000	-1713,2000
75	228,0000	1771,3000	537,9330	132001,0000	-555,7000	-1759,0000
76	428,0000	2132,6000	600,9440	135063,0000	-482,6000	-1423,5000
77	648,0000	2210,9000	633,5510	138197,0000	-678,5000	-1905,3000
78	607,0000	2645,7000	670,0390	141403,0000	-866,9000	-2234,8000
79	632,0000	3146,9000	703,2900	144683,0000	-1484,7000	-2596,4000
80	661,0000	3474,8000	713,8410	148040,0000	-1911,1000	-2873,7000
81	177,0000	4496,0000	716,5340	151315,0000	-1930,6000	-2736,0000
82	102,0000	4206,6000	713,5930	154662,0000	-1979,6000	-2649,3000
83	384,0000	3717,0000	724,5680	158083,0000	-3359,7000	-3359,6000
84	136,0000	3597,2000	776,7840	161580,0000	-4166,2000	-3673,2000
85	3,7000	4508,6000	807,7000	165155,0000	-3932,0000	-3077,5000

YEAR	NNP	PC	PCG	PCP	PCPI	PDROL
71	3831,1000	0,1591	0,1515	0,1599	32,0500	14,3948
72	4657,7000	0,1751	0,1700	0,1757	34,1500	15,9446
73	6648,0000	0,2297	0,2303	0,2296	44,7500	18,3116
74	10750,4000	0,3060	0,3021	0,3064	62,9100	21,0490
75	12301,6000	0,3508	0,3455	0,3517	74,9000	25,8366
76	15103,2000	0,3963	0,4084	0,3944	89,7800	30,6709
77	18112,1000	0,4491	0,4580	0,4477	99,6900	31,4555
78	21332,6000	0,5055	0,4985	0,5067	107,7700	31,3355
79	30854,5000	0,5962	0,5706	0,6007	129,7600	39,5624
80	44175,8000	0,7164	0,7489	0,7102	149,7700	58,0106
81	52889,8000	0,8201	0,8545	0,8135	162,5400	65,1031
82	56860,3000	0,8959	0,8783	0,8993	177,1400	104,2310
83	65513,6000	1,0000	1,0000	1,0000	196,1900	157,5400
84	77728,3000	1,0927	1,0960	1,0921	219,2400	215,5440
85	84694,4000	1,1883	1,2137	1,1835	229,9000	236,5702

YEAR	PFDD	FGDP	PI	FM	PMMFD	FMMTD
71	.1598	0,1200	0,1626	0,1580	.....	.....
72	.1808	0,1324	0,2018	0,1730	.....	.....
73	.2325	0,1694	0,2430	0,2207	0,3648	0,3112
74	.3054	0,2496	0,3033	0,2909	0,5141	0,4409
75	.3566	0,2839	0,3788	0,3159	0,6745	0,5467
76	.4064	0,3182	0,4454	0,3390	0,6379	0,6688
77	.4513	0,3599	0,4588	0,3561	0,6972	0,6634
78	.5136	0,4171	0,4867	0,3879	0,6625	0,6663
79	.6460	0,5668	0,6193	0,5718	0,7855	0,7097
80	.7685	0,7322	0,6756	0,6650	0,9430	0,7814
81	.7969	0,8126	0,8004	0,7056	1,0138	0,8477
82	.8649	0,8763	0,8443	0,7472	1,0406	0,9967
83	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000
84	1,1224	1,1192	1,1015	1,1342	1,0231	0,9390
85	1,2216	1,1825	1,1700	1,1672	0,9853	0,9653

YEAR	FMOGD	FMPMD	PMRICE	PX	PXGAS	PXMF	PXOIL
71	.....	.....	.....	0.0450	.....	.....	2,1248
72	.....	.....	.....	0.0536	.....	.....	2,7968
73	0.0944	0.5992	0.6235	0.0804	.....	.....	4,0094
74	0.3032	0.6585	1.0059	0.1694	.....	.....	12,1068
75	0.3248	0.7285	1.4347	0.1652	.....	0.2564	12,4118
76	0.3780	0.6581	1.0528	0.1765	.....	0.3751	12,5199
77	0.3682	0.7016	1.0457	0.2009	0.6216	0.3547	13,4072
78	0.4024	0.7016	0.9739	0.2192	0.5540	0.4381	13,4677
79	0.4324	0.7620	0.9443	0.4090	0.6861	0.6145	18,4327
80	0.7024	0.8222	1.0446	0.6173	1.0296	0.6943	30,6326
81	0.9045	1.0036	1.1670	0.7644	1.1224	0.9390	35,0196
82	1.0247	0.9177	1.0138	0.7849	1.1241	0.8920	34,4668
83	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	29,7834
84	0.8096	0.9304	0.9701	1.1203	0.9365	1.1737	27,9180
85	0.7437	.....	0.7271	1.1457	0.9728	1.3034	26,2403

YEAR	PXPM	PWX	QDROL	QWOIL	QXGAS	QXOIL
71	.....	0.3186	6578,4600	2378,0000	.....	273,2000
72	.....	0.3474	7944,8700	2505,0000	.....	345,0000
73	.....	0.4270	9191,4700	2731,0000	.....	426,1000
74	.....	0.5929	10712,1000	2789,0000	.....	424,0000
75	0.2249	0.6449	12205,7000	2644,0000	.....	399,7000
76	0.2857	0.6582	13793,6000	2875,0000	.....	485,7000
77	0.3537	0.7157	15546,3000	2873,0000	7,9000	535,6000
78	0.3705	0.7865	17848,5000	3011,0000	54,1000	512,3000
79	0.7400	0.9237	19716,9000	3127,0000	91,7000	464,3000
80	0.8588	1.1026	22048,0000	2979,0000	124,2000	438,2000
81	0.7447	1.0951	24372,4000	2795,0000	125,5000	433,3000
82	0.6881	1.0564	25176,4000	2674,0000	131,7000	359,9000
83	1.0000	1.0000	24961,6000	2652,0000	140,5000	379,5000
84	1.2288	0.9790	24533,5000	2708,0000	207,7000	420,7000
85	.....	0.9570	24241,3000	.....	219,1000	342,5000

YEAR	RFEX	RPEDB	RTBUS	SB	SMB	TI
71	393,4200	31,8000	4,3400	0,0000	469,0000	228,6
72	415,0000	37,1000	4,0700	0,0000	695,0000	247,3
73	415,0000	49,5000	7,0300	129,0000	987,0000	375,3
74	415,0000	62,7000	7,8700	372,5000	1452,0000	478,2
75	415,0000	71,0000	5,8200	118,4000	1978,0000	516,5
76	415,0000	80,4000	4,9900	235,3000	2631,0000	717,2
77	415,0000	181,1000	5,2700	197,3000	3131,0000	837,3
78	442,0500	276,8000	7,2200	249,8000	3809,0000	1043,5
79	623,0500	624,4000	10,0400	703,6000	5222,0000	1372,2
80	627,0000	772,6000	11,6200	1490,7000	7691,0000	1699,6
81	631,7500	775,5000	14,0800	1559,4000	9716,0000	1830,9
82	661,4250	926,5000	10,7200	1614,5000	11075,0000	2068,4
83	909,2750	1442,0000	8,6200	1284,9000	14663,0000	2450,8
84	1025,9500	2688,3000	9,5700	1256,1000	17937,0000	2551,7
85	1098,0000	4026,0000	7,4900	1252,4000	.....	3431,1

YEAR	TIME	TXNQL	TXQL	TXITL	UNEM	W
71	1,0000	75,0000	97,2000	400,8000	2051,0000	.....
72	2,0000	107,9000	176,9000	532,1000	2409,0000	.....
73	3,0000	161,5000	276,1000	812,9000	2775,0000	.....
74	4,0000	252,3000	890,6000	1621,1000	3145,0000	141,0000
75	5,0000	351,6000	1085,3000	1953,4000	3444,0000	170,7000
76	6,0000	408,9000	1500,8000	2626,9000	3909,0000	208,2000
77	7,0000	558,0000	1931,2000	3326,5000	4297,0000	255,9000
78	8,0000	662,9000	2126,6000	3833,0000	4687,0000	295,8000
79	9,0000	912,1000	3206,3000	5490,6000	5079,0000	369,8000
80	10,0000	1231,3000	6835,9000	9766,8000	5469,0000	468,2000
81	11,0000	1461,3000	7922,2000	11214,4000	5864,0000	562,7000
82	12,0000	1920,4000	8211,0000	12199,8000	7355,0000	700,3000
83	13,0000	2272,7000	9093,7000	13817,2000	8476,0000	816,3000
84	14,0000	2004,6000	11637,6000	16193,5000	8303,0000	899,9000
85	15,0000	3339,4000	10290,0000	17060,5000	10259,0000	.....

YEAR	X	XBFD	XGASD	XOILD	XR
71	570,3000	1307,0000	.....	580,5000	12673,3000
72	839,2000	1757,0000	.....	964,9000	15656,7000
73	1517,1000	2957,0000	.....	1708,4000	18869,4000
74	3461,3000	6755,0000	.....	5133,3000	20432,7000
75	3346,3000	6869,0000	.....	4961,0000	20256,1000
76	4078,6000	8615,0000	.....	6080,9000	23108,2000
77	4953,5000	10761,0000	87,6000	7180,9000	24656,5000
78	5316,5000	11020,0000	534,7000	6899,5000	24254,1000
79	10147,5000	15907,0000	1124,4000	8558,3000	24810,5000
80	16162,2000	22609,0000	2281,2000	13423,2000	26182,1000
81	16401,5000	23665,0000	2512,8000	15174,0000	21456,7000
82	15324,5000	19747,0000	2640,9000	12404,6000	19524,1000
83	20447,7000	18689,0000	2506,4000	11302,8000	20447,7000
84	23551,8000	20754,0000	3470,2000	11745,1000	21022,8000
85	21671,1000	18527,0000	3802,1000	8987,3000	18915,1000

YEAR	XRMFD	XRFMD
71	.....	.....
72	.....	.....
73	.....	.....
74	.....	.....
75	306,0000	3288,0000
76	227,0000	3764,0000
77	512,0000	3970,0000
78	563,0000	4134,0000
79	973,0000	4217,0000
80	950,0000	4182,0000
81	870,0000	3103,0000
82	1026,0000	2824,0000
83	2054,0000	2951,0000
84	2398,0000	3099,0000
85	.....	.....

Appendix 2-2

 DATA for the BAPPENAS Core Model-81

List of Variable Names (# Exogenous Variable)
 (Real = 1973 constant price)

C : Nominal Consumption Expenditure
 CG : Nominal Government Consumption Expenditure
 CGR #: Real Government Consumption Expenditure
 CP : Nominal Private Consumption Expenditure
 CPR : Real Private Consumption Expenditure
 CR : Real Consumption Expenditure
 CRPSM #: Amount of Credit Supply to Private Sector by Monetary System
 DEP : Nominal Depreciation
 DEPR : Real Private Depreciation
 DEPR : Real Depreciation
 DUM7080 : Dummy Variable for Private Consumption Deflator (1 for 1970-1980,
 0 for 1980-1983)
 DUM8182 : Dummy Variable for Non-oil and Non-gas Exports (1 for 1981-1982,
 0 otherwise)
 EMP : Total Employment
 GDP : Nominal Gross Domestic Product
 GDPR : Real Gross Domestic Product
 GDPRC : Real Capacity Output
 GNP : Nominal Gross National Product
 GNPR : Real Gross National Product
 I : Nominal Gross Domestic Fixed Capital Formation
 IG : Nominal Gross Government Fixed Capital Formation
 IGR #: Real Gross Government Fixed Capital Formation
 IP : Nominal Gross Domestic Private Fixed Capital Formation
 IPR : Real Gross Domestic Private Fixed Capital Formation
 IR : Real Gross Domestic Fixed Capital Formation
 KPR : Real Private Capital Stock
 KR : Real Total Capital Stock
 LABF : Total Labour Force
 M : Nominal Total Import
 MC : Nominal Imports of Consumption Goods
 MCR : Real Imports of Consumption Goods
 MI : Nominal Imports of Investment Goods
 MIR : Real Imports of Investment Goods
 MR : Real Total Import
 MRM : Nominal Imports of Raw Materials and Intermediate Goods
 MRMR : Real Imports of Raw Materials and Intermediate Goods
 MSD : Nominal Statistical Discrepancy for Import Sector
 MSDR : Real Statistical Discrepancy for Import Sector
 MWR #: Real World Imports
 N #: Population
 NFIA : Nominal Net Factor Income from Abroad
 NFIAR : Real Net Factor Income from Abroad

NNP : Nominal Net National Product
 NNPR : Real Net National Product
 PC : Private Consumption Deflator
 POG : Government Consumption Deflator
 PCP : Private Consumption Deflator
 PCPI : Consumer Price Index
 PDROL #: Price of Refined Oil for Domestic Consumption
 PGDP : GDP Deflator
 PI : Fixed Capital Formation Deflator
 PM : Import Deflator
 PMC : Import Deflator for Consumption Goods
 PMCD #: Dollar Price Index for Consumption Goods Imports
 PMI : Import Deflator for Investment Goods
 PMID #: Dollar Price Index for Investment Goods Imports
 PMRM : Import Deflator for Raw Materials and Intermediate Goods
 PMRMD #: Dollar Price Index for Raw Materials and Intermediate Goods Imports
 PMSD #: Import Deflator for Services and Statistical Discrepancy
 PX : Export Deflator
 PXGAS #: Price Index of Gas Export in US\$
 PXNOS #: Price Index of Non-oil and Non-gas Exports in US\$
 PXOIL #: Export Price of Crude Oil in US\$ per barrel
 FWX #: World Export Price
 QOOIL : Quantity of Crude Oil for Domestic Consumption in million barrels
 QOROL : Quantity of Refined Oil for Domestic Consumption in million barrels
 QMOIL #: Quantity of Crude Oil Import in million barrels
 QMROL #: Quantity of Refined Oil Import in million barrels
 QOIL #: Quantity of Oil Production
 QXGAS : Quantity of Export of LNG
 QXOIL : Quantity of Crude Oil Export in million barrels
 QXOSD #: Statistical Discrepancy for the Quantity of Oil Export
 RFEX #: Rate of Foreign Exchange
 SMB #: Nominal Supply of Broad Money
 TI : Nominal Net Indirect Tax
 TIME #: Time Trend
 TIR : Real Net Indirect Tax
 TY : Direct Income Tax
 UNEM : Unemployment
 X : Nominal Total Export
 XGAS : Nominal Value of Gas Export in billion Rp
 XGASD #: Nominal Value of Gas Export in million US\$
 XGASR : Real Gas Export in billion Rp
 XNOS : Nominal Value of Non-oil and Non-gas Export in billion Rp
 XNOSD : Nominal Value of Non-oil and Non-gas Exports in million US\$
 XNOSR : Real Non-oil and Non-gas Exports in billion Rp
 XOIL : Nominal Value of Crude Oil Export in billion Rp
 XOILD : Nominal Value of Crude Oil Export in million US\$
 XOILR : Real Crude Oil Export in billion Rp
 XR : Real Total Export

List of Data for Core Model-81

YEAR	C	CG	CGR	CP	CPR
1969	2496,8000	199,0000	414,0000	2297,8000	3791,5000
1970	2871,7000	293,0000	483,9000	2578,7000	3904,6000
1971	3188,7000	341,0000	518,3000	2847,7000	4088,0000
1972	3722,7000	414,0000	560,9000	3308,7000	4323,5000
1973	5520,1000	716,0000	716,0000	4804,1000	4804,1000
1974	8184,8000	841,0000	641,0000	7343,8000	5502,1000
1975	9985,2000	1253,7000	835,5000	8731,5000	5699,2000
1976	12162,8000	1590,5000	896,7000	10572,3000	6153,5000
1977	14558,3000	2077,3000	1044,4000	12481,0000	6399,6000
1978	17843,4000	2658,9000	1228,2000	15184,5000	6879,5000
1979	23247,4000	3733,4000	1345,0000	19514,0000	7865,8000
1980	32195,1000	4688,2000	1489,6000	27502,9000	8867,7000
1981	41347,9000	5787,9000	1641,0000	35560,0000	10349,5000
1982	48502,0000	6831,7000	1776,1000	41670,3000	10697,5000
1983	57022,3000	7791,3000	1758,9000	49231,0000	11501,1000

Year	CR	CRFMS	DEP	DEPPR	DEPR
69	4205,5000	138,0000	176,6000	287,7000	313,3000
70	4338,5000	250,0000	210,5000	329,5000	336,8000
71	4606,3000	341,0000	238,6000	340,5000	360,3000
72	4884,4000	524,0000	297,7000	342,6000	394,2000
73	5520,1000	932,0000	439,0000	416,1000	439,0000
74	6143,1000	1187,0000	696,0000	536,2000	472,5000
75	6534,7000	1376,0000	821,8000	499,1000	496,0000
76	7050,2000	1732,0000	1006,6000	520,7000	530,8000
77	7444,0000	2017,0000	1235,7000	618,6000	576,6000
78	8107,7000	2605,0000	1482,8000	698,5000	624,0000
79	9210,8000	3159,0000	2089,4000	722,7000	663,5000
80	10357,3000	4339,0000	2962,1000	858,8000	728,5000
81	11990,5000	6095,0000	3511,8000	932,6000	786,2000
82	12473,6000	8312,0000	3876,1000	989,8000	803,9000
83	13260,0000	10683,0000	4629,0000	999,3000	837,6000

YEAR	EMP	GDP	GDPR	GDPRC	GNP
69	38134.0000	2718.0000	4820.5000	.....	2683.1000
70	38668.0000	3238.0000	5182.0000	5764.8800	3189.5000
71	39210.0000	3672.0000	5544.7000	5965.2800	3604.1000
72	40710.0000	4564.0000	6067.2000	6269.9200	4419.8000
73	42267.0000	6753.4000	6753.4000	6636.4400	6508.0000
74	43884.0000	10708.0000	7269.0000	7063.7400	10209.4000
75	45563.0000	12642.5000	7630.8000	7580.0800	12085.7000
76	47306.0000	15466.7000	8156.3000	8177.4500	14984.2000
77	48266.0000	19033.0000	8882.0000	8752.4700	18355.2000
78	49337.0000	22746.0000	9566.5000	9422.0400	21879.3000
79	50433.0000	32025.4000	10164.9000	10186.8000	30541.0000
80	51553.0000	45445.7000	11169.2000	10965.1000	43435.0000
81	53246.0000	54027.0000	12054.6000	11923.5000	52102.1000
82	53919.0000	59632.6000	12325.4000	12891.6000	57675.1000
83	55026.0000	71214.7000	12842.2000	14016.7000	68178.8000

YEAR	GNPR	I	IG	IGR	IP
69	4765.5000	317.0000	73.4000	124.5000	243.6000
70	5111.8000	455.0000	165.2000	259.7000	289.8000
71	5449.9000	580.0000	196.3000	296.9000	383.7000
72	5883.3000	857.0000	247.6000	298.2000	609.4000
73	6508.0000	1208.0000	405.3000	405.3000	802.7000
74	6890.7000	1797.0000	664.1000	532.2000	1132.9000
75	7241.8000	2571.7000	1071.5000	687.6000	1500.2000
76	7842.2000	3204.9000	1654.7000	903.1000	1550.2000
77	8461.9000	3826.4000	2046.7000	1084.5000	1779.7000
78	9073.3000	4670.7000	2289.6000	1143.6000	2381.1000
79	9515.7000	6704.3000	3144.9000	1142.7000	3559.4000
80	10410.5000	9485.2000	5136.5000	1568.3000	4348.7000
81	11380.9000	11553.4000	6601.7000	1839.1000	4951.7000
82	11672.7000	13467.1000	7130.8000	1925.6000	6336.3000
83	12007.1000	17187.7000	7720.0000	1761.2000	9467.7000

YEAR	IPR	IR	KPR	KR	LABF
69	413,3000	537,8000	2786,2000	8498,5000	39828,0000
70	455,6000	715,3000	2912,3000	8877,0000	40539,0000
71	570,0000	866,9000	3145,3000	9383,6000	41261,0000
72	733,8000	1032,0000	3536,5000	10021,4000	42769,0000
73	802,7000	1208,0000	3923,1000	10790,4000	44332,0000
74	907,8000	1440,0000	4294,7000	11757,9000	45953,0000
75	962,6000	1650,2000	4758,2000	12912,1000	47632,0000
76	846,1000	1749,2000	5083,6000	14130,5000	49374,0000
77	943,0000	2027,5000	5408,0000	15581,40000	51178,0000
78	1189,3000	2332,9000	5898,8000	17290,3000	53049,0000
79	1293,3000	2436,0000	6469,4000	19062,8000	54988,0000
80	1327,7000	2896,0000	6938,3000	21230,3000	56998,0000
81	1379,4000	3218,5000	7385,1000	23662,6000	59081,0000
82	1711,1000	3636,7000	8106,4000	26495,4000	61240,0000
83	2159,9000	3921,2000	9267,0000	29579,0000	63479,0000

YEAR	M	MC	MCR	MI	MIR	MR
69	424,2000	72,0134	106,2300	77,8488	109,9930	668,8000
70	522,7000	91,6515	99,3105	136,4730	167,3650	755,8000
71	623,5000	82,6969	74,7056	182,7830	187,3060	871,2000
72	778,1000	104,4970	100,0020	295,5630	246,1460	992,6000
73	1330,8000	269,2110	269,2110	459,4880	459,4880	1330,8000
74	2318,3000	293,4050	199,3130	644,3290	503,3510	1759,1000
75	2811,6000	281,1630	155,6040	884,4480	454,8370	1964,2000
76	3522,3000	380,0990	258,8490	1134,2400	446,5350	2293,3000
77	3864,5000	458,4090	295,1730	1109,3800	419,7760	2395,3000
78	4742,0000	528,9570	311,5890	1250,6900	468,6900	2698,4000
79	7554,7000	736,5700	309,1140	1677,1900	394,8190	3303,9000
80	10079,8000	967,7120	396,2310	2811,0900	605,4310	3803,4000
81	13807,2000	883,6290	289,7620	3899,5400	739,9210	4832,6000
82	15681,7000	833,2630	280,7750	5382,6100	886,2650	5229,2000
83	20728,2000	1177,4200	330,8480	6399,2000	765,1790	5874,0000

YEAR	MRM	MRMR	MSD	MSDR	MWR
69	104,6460	130,8150	169,6920	321,7620	388,1000
70	137,4230	152,1230	157,1530	337,0030	434,3000
71	168,3840	208,6700	189,6360	400,5180	446,5200
72	248,0460	294,9910	129,9940	351,4830	486,5500
73	403,8780	403,8780	198,2230	198,2230	544,9000
74	656,6550	482,5720	723,9110	573,8640	565,1360
75	813,8570	516,8130	832,1320	836,9460	537,9330
76	840,0020	552,7930	1167,9600	1035,1200	600,9440
77	1017,7900	654,0270	1278,9200	1026,3200	633,5510
78	1177,8400	597,2780	1784,5100	1320,8400	670,0390
79	2073,6400	685,9730	3067,3000	1913,9900	703,2900
80	3014,3700	893,3830	3286,6300	1908,3600	713,8410
81	3601,4800	928,1850	5417,5500	2874,7300	716,0320
82	4935,0200	1236,6100	4530,8100	2825,4500	714,1590
83	7291,6600	1408,5000	5859,9200	3369,4700	721,0000

YEAR	N	NFIA	NFIAR	NNP	NNPR
69	115031,0000	-34,9000	-55,0000	2372,1000	4218,1000
70	117699,0000	-48,5000	-70,2000	2782,5000	4523,3000
71	120429,0000	-67,9000	-94,8000	3136,4000	4817,7000
72	123224,0000	-144,2000	-183,9000	3886,1000	5194,6000
73	126083,0000	-245,4000	-245,4000	5741,0000	5741,0000
74	129008,0000	-498,6000	-378,3000	9066,4000	6066,5000
75	132001,0000	-556,8000	-389,0000	10745,5000	6375,2000
76	135063,0000	-482,5000	-314,1000	13287,4000	6912,3000
77	138197,0000	-677,8000	-420,1000	16273,9000	7454,5000
78	141403,0000	-866,7000	-493,2000	19367,6000	7983,1000
79	144683,0000	-1484,4000	-649,2000	27146,8000	8356,5000
80	148040,0000	-2010,7000	-758,7000	38838,3000	9137,7000
81	151315,0000	-1924,9000	-673,7000	46838,1000	10008,3000
82	154662,0000	-1957,5000	-652,7000	51666,5000	10268,2000
83	158083,0000	-3035,9000	-835,1000	61269,2000	10543,7000

YEAR	PC	PCG	PCP	PCPI	POROL	PGDP	PI
69	0.5937	0.4807	0.6060	27.3800	10.2616	0.5638	0.5894
70	0.6544	0.6055	0.6604	30.7400	13.9500	0.6249	0.6361
71	0.6922	0.6579	0.6966	32.0400	14.7869	0.6623	0.6611
72	0.7622	0.7381	0.7653	34.1600	16.2076	0.7522	0.8304
73	1.0000	1.0000	1.0000	44.7600	18.8009	1.0000	1.0000
74	1.3324	1.3120	1.3347	62.9300	21.7338	1.4731	1.2479
75	1.5280	1.5005	1.5321	74.9300	27.0675	1.6568	1.5584
76	1.7252	1.7737	1.7181	89.8000	31.6149	1.8963	1.8322
77	1.9557	1.9890	1.9503	99.7200	31.4283	2.1430	1.8873
78	2.2008	2.1649	2.2072	107.8100	31.3492	2.3777	2.0021
79	2.5239	2.7758	2.4809	134.5600	43.8097	3.1506	2.7522
80	3.1081	3.1473	3.1015	149.7700	65.0356	4.0688	3.2753
81	3.4484	3.5271	3.4359	162.5700	65.2750	4.4819	3.5897
82	3.8884	3.8465	3.8953	177.1600	104.6570	4.8382	3.7031
83	4.3003	4.4296	4.2805	196.1900	158.4430	5.5454	4.3833

YEAR	PM	FMC	FPCD	FMI	PMID	FMRM	FMRMD
69	0.6343	0.6779	0.8630	0.7078	0.9010	0.8000	1.0184
70	0.6916	0.9229	1.0493	0.8154	0.9271	0.9034	1.0271
71	0.7157	1.1070	1.1677	0.9759	1.0294	0.8069	0.8512
72	0.7839	1.0450	1.0450	1.2009	1.2009	0.8409	0.8409
73	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
74	1.3179	1.4721	1.4721	1.2801	1.2801	1.3607	1.3607
75	1.4314	1.8069	1.8069	1.9445	1.9445	1.5748	1.5748
76	1.5359	1.4684	1.4684	2.5401	2.5401	1.5196	1.5196
77	1.6134	1.5530	1.5530	2.6428	2.6428	1.5562	1.5562
78	1.7573	1.6976	1.5937	2.6685	2.5052	1.9720	1.8513
79	2.2866	2.3828	1.5872	4.2480	2.8295	3.0229	2.0135
80	2.6502	2.4423	1.6165	4.6431	3.0732	3.3741	2.2333
81	2.8561	3.0495	2.0032	5.2702	3.4620	3.8801	2.5489
82	2.9989	2.9677	1.8621	6.0727	3.8102	3.9908	2.5039
83	3.5288	3.5588	1.6243	8.3630	3.8169	5.1769	2.3628

YEAR	FMSD	PX	PXGAS	PXNOS	PXOIL	PWX	QDOIL
69	0.5274	0.4402	0.0010	0.0000	1.6889	0.6736	48,5293
70	0.4663	0.5204	0.0010	0.6341	1.6426	0.7047	52,3489
71	0.4735	0.5588	0.0010	0.6269	2.1248	0.7461	50,0000
72	0.3698	0.6668	0.0010	0.6295	2.7960	0.8135	55,2000
73	1.0000	1.0000	1.0000	1.0000	4.0094	1.0000	64,2000
74	1.2615	2.1069	0.0010	1.3468	12.1040	1.3886	78,2000
75	0.9943	2.0547	0.0010	1.2083	12.4118	1.5104	89,7000
76	1.1283	2.1945	0.0010	1.4829	12.5199	1.5415	78,6000
77	1.2461	2.4991	3.3502	1.9837	13.4322	1.6762	113,6000
78	1.3510	2.7265	3.6536	1.9736	13.7660	1.8420	136,1000
79	1.6026	5.2847	4.4884	2.7748	18.4327	2.1632	155,6000
80	1.7222	8.0551	6.8267	3.2438	30.6326	2.5907	168,0000
81	1.8845	8.8952	7.2422	2.7439	35.0196	2.5622	158,0000
82	1.6036	9.2399	7.3027	2.6002	34.4573	2.4689	169,3000
83	1.7392	11.5524	6.5081	2.4773	29.7834	2.3368	190,4000

YEAR	QOROL	QMOIL	QMROL	QOIL	QXGAS	QXOIL
69	5840,1100	0.0000	2.7620	270,9510	.....	229,8000
70	6196,8300	0.0000	2,3320	311,5520	.....	264,4000
71	6578,4600	0.0000	6.4100	325,6480	.....	273,2000
72	7944,8700	0.0000	11.3340	395,5600	.....	345,1000
73	9191,4700	0.0000	12,8450	488,5360	.....	426,1000
74	10706,2000	0.0000	12,6320	501,8380	.....	424,1000
75	12366,6000	0.0000	14,9650	476,8550	.....	399,7000
76	13585,3000	10.0560	30.4160	550,3790	.....	485,7000
77	15537,8000	29.6620	18.2270	615,1230	9.5233	535,6000
78	17844,5000	31.6060	16.9360	569,6980	53,3020	501,2000
79	19706,0000	30.4970	16,2550	580,4470	91,1004	464,3000
80	22048,0000	32.9180	21,9960	577,0100	121,7040	438,2000
81	24372,2000	37.0000	42,7000	584,8300	126,3680	433,3000
82	25176,4000	45.4000	39,8220	488,1800	131,7000	360,0000
83	24947,8000	25.7000	23,6380	490,4800	140,2640	379,5000

YEAR	RFEX	SMB	TI	TIME	TIR	TY
69	326.0000	233.0000	135.0000	-4.0000	234.1000	40.6000
70	365.0000	330.0000	188.0000	-3.0000	251.7000	48.9000
71	393.4200	469.0000	229.0000	-2.0000	271.9000	65.8000
72	415.0000	695.0000	236.0000	-1.0000	294.5000	83.4000
73	415.0000	987.0000	328.0000	0.0000	328.0000	123.5000
74	415.0000	1452.0000	447.0000	1.0000	351.7000	197.2000
75	415.0000	1978.0000	519.2000	2.0000	370.6000	300.3000
76	415.0000	2631.0000	690.5000	3.0000	399.1000	339.2000
77	415.0000	3131.0000	845.6000	4.0000	430.8000	468.4000
78	442.0500	3808.0000	1028.9000	5.0000	466.2000	547.3000
79	623.0500	5222.0000	1304.8000	6.0000	495.7000	775.5000
80	627.0000	7691.0000	1634.6000	7.0000	544.3000	1025.7000
81	631.7600	9715.0000	1752.2000	8.0000	587.7000	1247.2000
82	661.4200	11075.0000	2132.5000	9.0000	600.6000	1631.9000
83	909.2600	14663.0000	2280.6000	10.0000	625.8000	1987.7000

YEAR	UNEM	X	XGAS	XGASD	XGASR
69	1694.0000	328.4000	.....	.....	.....
70	1871.0000	434.0000	.....	.....	.....
71	2051.0000	526.8000	.....	.....	.....
72	2059.0000	762.4000	.....	.....	.....
73	2065.0000	1356.1000	.....	.....	.....
74	2069.0000	3044.5000	.....	.....	.....
75	2069.0000	2897.3000	.....	.....	.....
76	2068.0000	3621.3000	.....	.....	.....
77	2912.0000	4512.8000	36.3540	87.6000	10.8514
78	3712.0000	4973.9000	236.3640	534.7000	60.7352
79	4555.0000	9628.4000	699.4980	1122.7000	103.8050
80	5445.0000	13849.2000	1430.3200	2281.2000	138.6760
81	5835.0000	14927.9000	1587.5000	2512.8000	144.0000
82	7321.0000	13345.2000	1746.7300	2640.9000	150.0800
83	8453.0000	17732.9000	2279.0000	2506.4000	159.8200

YEAR	XNOS	XNOSD	XNOSR	XOIL	XOILD
69	151,8760	465,8770	0,0000	126,5200	388,1000
70	246,2680	674,7070	441,5680	158,5200	434,3000
71	308,5600	744,3000	519,1840	228,3800	580,5000
72	353,3500	851,4470	561,3440	400,4340	964,9000
73	663,0180	1597,6300	663,0160	708,9860	1708,4000
74	902,0780	2173,6800	669,7750	2130,3200	5133,3000
75	746,3770	1798,5000	617,7240	2058,8100	4961,0000
76	1040,5100	2507,2600	701,6860	2523,5700	6080,9000
77	1457,1600	3511,2000	727,0280	2985,6300	7194,3000
78	1617,6000	3659,3000	765,4650	3049,9200	6899,5000
79	3476,0400	5579,1000	835,8840	5332,2000	8588,9000
80	3811,7800	6079,4000	764,4620	8416,3000	13423,2000
81	2799,9200	4431,9000	648,7140	9586,3000	15174,0000
82	2543,7400	3845,9000	613,6740	8204,7000	12404,6000
83	4394,8300	4833,4000	806,1550	10277,2000	11302,8000

YEAR	XOILR	XR
69	382,3870	746,0000
70	439,9180	834,0000
71	454,5430	942,7000
72	574,1800	1143,4000
73	708,9860	1356,1000
74	705,6610	1445,0000
75	665,0560	1410,1000
76	808,1640	1650,2000
77	891,1810	1805,8000
78	833,9520	1824,3000
79	772,5500	1822,0000
80	729,1000	1719,3000
81	721,0000	1678,2000
82	599,0000	1444,3000
83	631,4000	1535,0000

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