The Decontrol of the Indonesian Foreign Exchange System, 1966-1971

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Discussion Paper No. 22
March 1972

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In the late 1960's the foreign sector of the Indonesian economy moved out of the thicket of direct quantitative controls and toward a system that relied on indirect pricing and market incentives. Today (December 1971), Indonesia is the largest (by population) 1/ less developed country with an open, relatively uncontrolled foreign sector and a realistic exchange rate. A recent (August 22, 1971) 10% devaluation of the rupiah indicates that the Government of Indonesia is still committed to maintaining this open system and avoiding the dangers of widespread quantitative controls. Since Indonesia is almost unique in its commitment to an open system, and yet descriptions of the present day Indonesian economy are scarce, a discussion of this phenomenon may be worthwhile.

This paper will try to describe and analyze the Indonesian foreign exchange system, as it has evolved and as it stands today. Attention will be focused exclusively on the post-Sukarno, post-1965 period. Section I will offer a brief description of the Indonesia economy as background. Section II will describe the evolution of the foreign exchange system toward its present state. Section III will describe the system as it stands today. Section IV will analyze the system and the problems that it faces. And Section V will offer a foreign exchange strategy for the future.

* This paper was originally presented at the NBER conference on Exchange Control, Liberalization, and Economic Development, February 26, 1972.
As a preliminary note, it is important to stress that the statistical basis for analyzing the Indonesian economy is poor. In addition to the usual deficiencies and weaknesses of LDC statistics, the latter years of the Sukarno era brought a near total breakdown in the gathering of statistics that the current regime is only beginning to repair. Further, quantitative controls on many aspects of economic life drove individuals to extra-legal economic channels, the activities of which were not reported. Export and import smuggling is the best known example of this. Finally, some special peculiarities of the Indonesian economy have made reliable statistics difficult to obtain. For example, until April 1970 only the export "check price" (the price used for export tax and multiple exchange rate determinations) was recorded in export value figures. The check price was almost 100% of the true FOB price for some exports and below 50% of FOB for others.

Section I: The Economy

(1) General

Indonesia ranks near the bottom of the less developed country income tables. In terms of GDP per capita, Indonesia is probably in the same range as India and Pakistan. The most recent 1970 estimates put Indonesia's GDP at Rp 3,328 billion.\(^2\) With an estimated population of 115 million,\(^3\) this works out to Rp 28,800 per capita. At the 1970 exchange rate of Rp 378 = US$1, this is $76 per capita. It is unlikely that this figure, or the underlying average welfare of which it is supposed to be an index, is appreciably different from what it was in 1930. The years 1930-1950 encompassed the Great Depression (a poor period for raw materials prices, with especially severe effects on the sugar economies of East Java and Bali), the Second World War and Japanese occupation and taxation, and a five-year struggle for independence. These were not propitious times for economic growth. During
the early 1950's, the economy prospered and made up the damage of the previous twenty years. But the subsequent departure of the Dutch, the spread of direct government controls to many sectors of the economy, and the increasing pace of inflation led to economic stagnation. The most recent estimates of real GDP at constant market prices show a growth rate of 2.1% between 1960 and 1966, a rate that was just keeping up with population growth.\footnote{4}

As is true for all less developed countries, Indonesia's economy is primarily agricultural. Table 1 gives the average percentage GDP sectoral breakdown for the 1960-68 period and the employment percentages ascertained in the 1961 census. (For a discussion of these figures see the sources cited in the table.) The central island of Java is mostly a rice growing area with small, intensively cultivated plots. It is also heavily populated; the island has 65% of the country's population on only 7% of the land area. The other islands are more sparsely populated, and their inhabitants tend to grow mostly cash crops for export (rubber, copra, coffee, pepper, spices), though rice is also grown in some areas. Indonesia has been a rice importing country, and self-sufficiency in rice has been an important economic and political goal.

A striking figure in Table 1 is the percentage of GDP originating in industry. Indonesia is relatively under-industrialized, even compared to its South and Southeast Asian neighbors. During the 1960's, Indonesia generated only 8.5% of its GDP in the manufacturing sector (excluding mining). By contrast, the percentage of GDP originating in manufacturing during the same period in India was 15.6%; in Pakistan, 11.0%; in Malaysia, 9.4%; in Thailand, 12.6%; and in the Philippines, 18.5%.\footnote{5} Even in 1970, with much of Indonesia's Industrial plant "rehabilitated" from the neglect and spare parts shortages of the Sukarno years, industrial output (value added) was only 10% of GDP.
Table 1: GNP (Average 1960-68) and Employment (1961), by Sector (Percentages)

<table>
<thead>
<tr>
<th>Sector</th>
<th>GNP</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>52.4%</td>
<td>71.9</td>
</tr>
<tr>
<td>Mining</td>
<td>3.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>8.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Construction</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Electricity</td>
<td>0.4</td>
<td>0.1</td>
</tr>
<tr>
<td>Transport</td>
<td>3.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Trade</td>
<td>15.5</td>
<td>6.7</td>
</tr>
<tr>
<td>Finance</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>Dwellings</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Public Administration</td>
<td>4.9</td>
<td>9.5</td>
</tr>
<tr>
<td>Services</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Sources: Arndt and Ross (1970); Hunter 1971.

With industrial wages that are among the lowest in the world -- industrial labor costs in 1971 are typically Rp 200-250 (US$0.55 - $0.66) per worker per day -- one would expect to find Indonesia with a comparative advantage in labor intensive manufacturing, like textiles and assembly operations. But this potential comparative advantage has not yet materialized, for a number of reasons: weak infrastructure support -- electricity, roads, rail, sea transport, message communications are all in poor shape; a general shortage of capital and entrepreneurial skills; a hostility to foreign capital investment and entrepreneurship during the Sukarno years; and fiscal, monetary, and foreign exchange policies during the Sukarno years that tended to discourage private capital formation and that did not generate enough
efficient government capital formation. Within the manufacturing sector, about two-thirds of value-added in 1970 was generated in the comparatively simple activities of food, beverages, tobacco, and textiles, with hand weaving and hand batik-dying accounting for an appreciable part of this last area. Indonesia has not yet entered the lists of less developed countries trying to export manufactured products. In 1970, less than 1/2% of Indonesian exports qualified as "manufactured."

(2) The Stabilization Program

A new political regime, led by General (later, President) Suharto, took power in early 1966, following the abortive coup of September 30, 1965. The economy that the new regime inherited was in a shambles. Indonesia was in the throes of a hyper-inflation. The rate of inflation in 1965 was over 600% per year. The banking system had disintegrated. The legal exchange rate was only 6% of the black market rate. Appreciable amounts of exports were being smuggled out of the country, and capital, too, was likely being smuggled out. The Sukarno regime had run up huge foreign debts, mostly for military hardware and public monuments. Indonesia owed $2.4 billion to foreign creditors, with little to show for it of a productive nature. The scheduled servicing of this debt called for $530 million in 1966. Recorded exports in 1965 were only $634 million.

Stopping inflation was a primary goal of the new regime. Measured on a January-to-January basis inflation in 1966 was "down" to a rate of 420%. In 1967, the rate was down to 170%. In 1968, the rate fell further to 35%. In 1969, prices rose 15%, and in 1970 prices rose by only 4%. (See Chart 1).

The proximate reasons for this halting of inflation are not hard to find: an end to government deficit spending, a more moderate expansion in the money supply, and a substantial inflow of resources from abroad. These phenomena are, of course, all related. In 1966 government expenditures were Rp 29.4 billion, while tax and other receipts were only Rp 13 billion, or only
Chart 1: Cost of Living Index, Djakarta (September 1966-1971)

44% of expenditures. The difference of Rp 16.3 billion (this was 2% of GDP) accounted for over 80% of the expansion of the money supply in 1966. But this 44% receipts/expenditure ratio was an improvement from the preceding year, when the ratio had been 36%! In 1967, the receipts picture improved considerably. Non-foreign-aid related receipts were Rp 60.2 billion, or 85% of routine budget expenditures. The counterpart funds from sales of foreign aid provided another Rp 24.7 billion, so that Rp 17.5 billion in development spending could take place. The overall deficit was only Rp 2.5 billion, or less than 3% of expenditures. By 1968 non-aid receipts were even with routine expenditures, and the overall budget was balanced. This was the first balanced budget Indonesia had achieved since 1951. As Table 2 indicates, by the 1969/70 fiscal year a substantial surplus on "current account" had been obtained, and the government had become an important source of savings in the economy.

The ending of the government deficits was the product of both an increase in tax receipts and a decrease in government spending, the latter occurring mostly on the capital budget. Many of the large public works and show piece projects of the Sukarno regime were stopped. As Table 2 indicates, "development" spending fell significantly in 1966 as a fraction of the government budget. Table 3 shows these effects yet more clearly. When corrected for inflation, routine government spending did not change appreciably, but real development spending fell in 1966. Also, it is likely that some of the Sukarno projects that were stopped were never accounted for in the official budget in the first place, so actual spending probably fell by more than the figures of Tables 2 and 3 indicate. At the same time, real tax receipts increased substantially. To some extent, taxes were increased especially in cases in which taxes and levies had been stated in absolute rupiah, the value of which had been drastically reduced by the inflation. But also effective tax
collection had disintegrated toward the end of the Sukarno years, and the new
government, by bringing a greater measure of political stability, was simply
able to collect existing taxes more effectively.

The preceding paragraphs overstate the case to some extent, since the
budget figures exclude some government agencies which ran at a loss and were
directly subsidized by the central bank. Chief among these was the government
rice procurement and price stabilization agency, BULOG. Further, the budget
accounted for rice expenditures (for salary in kind) at a price paid by the
treasury to BULOG that was below BULOG's costs, transferring deficits from
the budget account to BULOG's account. Still, I believe that the trends shown
in the tables are indicative of the true trends.

It is worth noticing at this point that the inflation might have
been brought under control even sooner than it was. As seen in Chart 1, the
rate of price increase in the middle of 1967 had definitely begun to slacken.
But a poor dry season rice harvest at the end of 1967 sent the price of rice
climbing again. The rice price in Djakarta, which had been roughly stable
between January and August 1967, doubled between August and December 1967 and
doubled again the next month. Since rice has a 31% weight in the price
index, these rises were heavily reflected in the price index. Further, "sympathy"
movements in other prices followed with a short lag. Since most prices and wages
tend to be keyed to the price of rice, these "sympathy" rises were to be expected.
Some statistical support can be given for the cost-push view of the pricing
process. As seen in Table 4, the correlation between the current price index
for all other items and the lagged price index for rice has been appreciably
higher than between the current price index for rice and lagged values of the
price index for all other items. The causality does seem to be running from
rice to the other items, rather than vice versa.
Table 2: Actual Government Revenues and Expenditures, 1965-1970/71 (billions of Rupiahs)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxes and other domestic receipts</td>
<td>0.9</td>
<td>13.1</td>
<td>60.2</td>
<td>149.7</td>
<td>243.7</td>
<td>344.6</td>
</tr>
<tr>
<td>Counterpart funds</td>
<td>-</td>
<td>-</td>
<td>24.7</td>
<td>35.5</td>
<td>91.1</td>
<td>120.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0.9</td>
<td>13.1</td>
<td>84.9</td>
<td>185.3</td>
<td>334.8</td>
<td>465.1</td>
</tr>
<tr>
<td>Expenditures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine</td>
<td>2.1</td>
<td>25.7</td>
<td>70.0</td>
<td>149.7</td>
<td>216.5</td>
<td>288.2</td>
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<tr>
<td>Development</td>
<td>0.4</td>
<td>3.7</td>
<td>17.5</td>
<td>35.5</td>
<td>118.1</td>
<td>169.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2.5</td>
<td>29.4</td>
<td>87.6</td>
<td>185.3</td>
<td>334.7</td>
<td>457.9</td>
</tr>
<tr>
<td>Deficit or Surplus</td>
<td>-1.6</td>
<td>-16.3</td>
<td>-2.7</td>
<td>-</td>
<td></td>
<td>+ 7.2</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Index (September 1966=1.00)</td>
<td>0.07</td>
<td>0.76</td>
<td>2.06</td>
<td>4.63</td>
<td>5.63</td>
<td>6.26</td>
</tr>
<tr>
<td>Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxes and other domestic receipts</td>
<td>12.6</td>
<td>17.2</td>
<td>29.2</td>
<td>32.3</td>
<td>43.3</td>
<td>55.0</td>
</tr>
<tr>
<td>Counterpart funds</td>
<td>-</td>
<td>-</td>
<td>12.0</td>
<td>7.7</td>
<td>16.2</td>
<td>19.2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12.6</td>
<td>17.2</td>
<td>41.3</td>
<td>40.0</td>
<td>59.5</td>
<td>74.3</td>
</tr>
<tr>
<td>Expenditures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine</td>
<td>30.0</td>
<td>33.8</td>
<td>34.0</td>
<td>32.3</td>
<td>538.5</td>
<td>46.0</td>
</tr>
<tr>
<td>Development</td>
<td>5.7</td>
<td>4.9</td>
<td>8.5</td>
<td>7.7</td>
<td>21.0</td>
<td>27.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>35.7</td>
<td>38.8</td>
<td>42.5</td>
<td>40.0</td>
<td>59.5</td>
<td>73.1</td>
</tr>
</tbody>
</table>

Source: Same as Table 2.
Table 4. Correlation Coefficients between Quarterly Price Indexes, 1966-1971 (first quarter)

<table>
<thead>
<tr>
<th></th>
<th>Current Rice Price Index</th>
<th>Rice Price Index Lagged One Quarter</th>
<th>Rice Price Index Lagged Two Quarters</th>
<th>Rice Price Index Lagged Three Quarters</th>
<th>All Other Commodities Price Index Lagged One Quarter</th>
<th>All Other Commodities Price Index Lagged Two Quarters</th>
</tr>
</thead>
<tbody>
<tr>
<td>All other commodities price index</td>
<td>0.67</td>
<td>0.79</td>
<td>0.87</td>
<td>0.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice price index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.64</td>
<td>0.64</td>
</tr>
</tbody>
</table>

Source: Computed from the figures in Table 5.
Table 5: Quarterly Cost of Living Indexes in Djakarta: Rice, All other Commodities, and Total
(September 1966 = 100)

<table>
<thead>
<tr>
<th></th>
<th>Rice</th>
<th>All other Commodities</th>
<th>Total Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966-I</td>
<td>60</td>
<td>25</td>
<td>36</td>
</tr>
<tr>
<td>II</td>
<td>80</td>
<td>45</td>
<td>56</td>
</tr>
<tr>
<td>III</td>
<td>94</td>
<td>84</td>
<td>87</td>
</tr>
<tr>
<td>IV</td>
<td>125</td>
<td>123</td>
<td>127</td>
</tr>
<tr>
<td>1967-I</td>
<td>186</td>
<td>157</td>
<td>166</td>
</tr>
<tr>
<td>II</td>
<td>167</td>
<td>190</td>
<td>183</td>
</tr>
<tr>
<td>III</td>
<td>221</td>
<td>198</td>
<td>205</td>
</tr>
<tr>
<td>IV</td>
<td>414</td>
<td>204</td>
<td>269</td>
</tr>
<tr>
<td>1968-I</td>
<td>878</td>
<td>220</td>
<td>424</td>
</tr>
<tr>
<td>II</td>
<td>644</td>
<td>347</td>
<td>439</td>
</tr>
<tr>
<td>III</td>
<td>652</td>
<td>413</td>
<td>467</td>
</tr>
<tr>
<td>IV</td>
<td>542</td>
<td>484</td>
<td>502</td>
</tr>
<tr>
<td>1969-I</td>
<td>525</td>
<td>552</td>
<td>544</td>
</tr>
<tr>
<td>II</td>
<td>526</td>
<td>542</td>
<td>537</td>
</tr>
<tr>
<td>III</td>
<td>507</td>
<td>556</td>
<td>541</td>
</tr>
<tr>
<td>IV</td>
<td>633</td>
<td>536</td>
<td>566</td>
</tr>
<tr>
<td>1970-I</td>
<td>793</td>
<td>577</td>
<td>616</td>
</tr>
<tr>
<td>II</td>
<td>569</td>
<td>624</td>
<td>607</td>
</tr>
<tr>
<td>III</td>
<td>584</td>
<td>619</td>
<td>603</td>
</tr>
<tr>
<td>IV</td>
<td>598</td>
<td>624</td>
<td>616</td>
</tr>
<tr>
<td>1971-I</td>
<td>745</td>
<td>661</td>
<td>656</td>
</tr>
<tr>
<td>II</td>
<td></td>
<td></td>
<td>639</td>
</tr>
<tr>
<td>III</td>
<td></td>
<td></td>
<td>621</td>
</tr>
</tbody>
</table>

Source: Biro Pusat Statistik, Monthly Statistical Bulletin, various issues; Rice index from BULOG figures.
Large rice imports in early 1968, mostly from PL 480, stabilized the rice price and lowered it somewhat, but the catching up of other prices continued to push the overall index up. As can be seen in Table 5, only by the first quarter of 1969 did other prices reach the same rough parity with rice that had existed in late 1966 and early 1967. In the absence of major structural changes, which are unlikely to have occurred over this period, we would expect this rough parity to re-assert itself. Thus, only by the first quarter of 1969 had the full effects of the poor harvest of the 1967 dry season been worked out. With better luck, the inflation might have ended a year earlier.

The inflow of external resources was also important to the halting of inflation. In 1966, the net inflow on government account (aid less debt repayment) was $96 million and private capital inflow was $50 million. In 1967, these figures jumped to $219 million and $100 million, respectively. As seen in Table 6, net official inflows continued to expand, while private inflows fell and then recovered in 1970. (The recent private capital inflow figures probably underestimate considerably the amounts of capital flowing in to finance activities like oil exploration.) These inflows made more goods available to the economy, and to some extent they also transferred rupiahs from the private sector to the government. Between 75% and 90% of the annual gross aid inflows were in the form of program aid, much of which the government sold off to the private sector. The government then used these counterpart funds as it did other fiscal receipts. This should not be confused with inflationary finance. By selling the aid, the government gained the claims over domestic resources that the buyers of the aid goods had formerly possessed. The counterpart rupiahs were thus a non-inflationary claim on domestic resources in the same way that tax rupiahs were a non-inflationary claim.
Hand in hand with efforts to increase the inflow of external resources were efforts to re-schedule the debt obligations of the Sukarno regime. The original obligations, requiring an immediate payment of $530 million in 1966, $270 million $275 million in 1967 and 1968, and further annual payments into the 1980's, would have had a crushing effect on the economy. A moratorium on Sukarno debt repayments was declared, and negotiations with the creditor countries followed. (Repayments were maintained however, on short-term obligations incurred after 1965.) Finally, in 1970, agreement on rescheduling was achieved with Indonesia's Western creditors, and the following year a similar agreement with its Socialist creditors was reached. Since debt repayments would have had the symmetrically opposite effects of aid inflows on the economy, the moratorium and rescheduling greatly facilitated the government's efforts to close its receipts expenditures gap.

Finally, with government deficits eliminated, the major source of money supply expansion had been eliminated. These actions were supported by a general tight money policy. In October 1966, interest rates were hiked to 6-9% per month from their previous nominal rate of 9% per annum. The government announced as a goal that 90% of all new credits should be for the financing of new production and exports. Importers were required to pre-pay 100% of the value of their imports plus 50% of the duties and were limited in their ability to borrow for this purpose.

By April 1967 these measures had had a large disinflationary effect, and the business community had begun to object. In that month, interest rates were lowered to 4-7% per month, the import prepayment was reduced to 25% of import value, and the prepayment of the import duties was abolished. (Subsequently, the 100% import prepayment was restored, and duty prepayments were re-imposed sporadically.)
Table 6: Capital Flows, 1966-1970 (million of dollars)

<table>
<thead>
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<tr>
<td>Program Aid</td>
<td>a</td>
<td>195</td>
<td>246</td>
<td>249</td>
<td>284</td>
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<tr>
<td>Project Aid</td>
<td>a</td>
<td>69</td>
<td>20</td>
<td>69</td>
<td>110</td>
</tr>
<tr>
<td>Other Aid (net)</td>
<td>a</td>
<td>9</td>
<td>32</td>
<td>7</td>
<td>-28</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>273</td>
<td>298</td>
<td>325</td>
<td>366</td>
</tr>
<tr>
<td>Debt Repayment</td>
<td>a</td>
<td>-54</td>
<td>-75</td>
<td>-40</td>
<td>-66</td>
</tr>
<tr>
<td>Private Capital (net)</td>
<td>50</td>
<td>100</td>
<td>33</td>
<td>55</td>
<td>109</td>
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<tr>
<td>Net capital flow</td>
<td>146</td>
<td>319</td>
<td>256</td>
<td>340</td>
<td>409</td>
</tr>
</tbody>
</table>

a. The $96 million in 1966 represents gross aid less debt repayment.

Since that time, interest rates have drifted downward until, in mid-1971 they stood at a 1-4% range per month.

Further, interest rates were made attractive on the saving side. In October 1963 the government instituted a program of time deposits paying 1 1/2% per month on one month deposits up to 6% per month on 1 year deposits, tax free, no questions asked. With the inflation largely over by this time, the latter rate was quickly seen to be too high and was lowered to 5% in March 1969 and lowered again a number of times in 1969. In mid-1971, the time deposit rates were 1% per month on one month deposits, 1-1/2% per month on three month deposits, 1-3/4% per month on six month deposits, and 2% per month on one year deposits.

The response to these interest rates was strong. In December 1968, three months after the beginning of the program, Rp 4.4 billion in deposits were in the program. Six months later, the figure was Rp 24.5 billion. In December 1969, they had grown Rp 33.6. By mid-1971 this figure had grown to Rp 73.7 billion.

Despite the tight money programs described above, the money supply continued to expand but at a slackened pace from the pre-1966 period. And, as price increases slackened for all of the reasons discussed above, transactions velocity declined and the public's willingness to hold cash balances increased. Between December 1965 and March 1971, the real money holdings of the economy increased by over four-fold.
(3) Why Did Stabilization Succeed?

The stabilization program that has been described was essentially quite an orthodox one. That it worked is really no surprise. That it was allowed to work is another question. What was it about the social-economic-political structure of Indonesia that allowed this stabilization program to work? This question has special interest, since many similar stabilization packages have repeatedly failed to halt much more moderate inflations in Latin America.

First, the sheer pace of the inflation made it easier to bring about a stabilization program. Though, undoubtedly, some groups gained relatively and some groups lost through the inflation, price increases of 600% a year must have created great uncertainties for all. The price level doubled between March and September 1965; it sextupled between September and the following March. With this kind of pace and acceleration, even the gainers might have concluded that they would be better off with less inflation and less uncertainty. Further, by late 1965, the inflation had fed on itself and velocity had increased substantially. For example, between December 1964 and December 1965, the money supply increased four-fold but prices increased six-fold. The political uncertainties of the last three months of 1965 surely accelerated the velocity. But, with the assumption to power in 1966 of a new government that at least seemed to promise political stability, velocity was likely to decrease, and some slackening of the inflation rate was likely to occur.

But these arguments only explain why a stabilization program might be allowed to begin and gain initial successes; they do not explain why the gainers from inflation would allow a stabilization program to continue after the inflation had slackened but not ceased. And, indeed, the April 1967 lowering of interest rates was in response to the complaints of a business community that was being hurt by the deflationary effects of the stabilization. But even after April, interest rates of 4-7% represented hefty borrowing charges and, except for the few months at the time of the bad rice harvest, represented
positive real rates of interest. The stabilization program was not junked in April 1967, and we must find further reasons why it was allowed to succeed.

A second reason for the success of the stabilization program is that Indonesia is not very urbanized. The 1961 census indicated that 15% of the population lived in urban areas. Though this percentage had surely grown by the mid-and late 1960's, it was still considerably below the 40-70% range usually found in Latin America. Thus, the urban constituency that might have benefited from inflation, through employment on deficit-financed urban monuments and public works and through the purchase of subsidized commodities, was simply not very big.

Third, Indonesia is not very industrial. The manufacturing sectors are frequently hit hard in Latin American deflations, and the workers in the manufacturing sectors are frequently vocal in their opposition to the effects of deflation. But, as noted above, the manufacturing sector is small in Indonesia. Manufacturing employment was only 5.7% of total employment in 1961, and that percentage was unlikely to have grown during the 1960's. Further, much of this manufacturing was in comparatively simple, basic items, the demand for which was likely to be income inelastic. Also, manufacturing had not benefited appreciably during the inflation. The available GNP figures indicate that real income originating in the manufacturing sector between 1961 and 1965 did not expand. And for some large-scale operations, like textiles and automobile assembly plants, output surely declined as the economy became more chaotic and raw materials and spare parts became more difficult to obtain.
Fourth, the urban and industrial population has not been strongly organized. Labor unions and associations of white collar and government employees were never economically strong because of general surplus labor conditions, but they were politically powerful before 1965. They were estimated to have within their ranks 20-25% of the wage and salary worker in industry and government service. But since 1965, their political power has been broken. There has simply been no one to lead the urban groups that may have been the losers from stabilization. In one late instance with which his author is personally familiar, the government in January 1970 ended the subsidy on kerosene and doubled its price. This is the sole cooking fuel for most Indonesians and an important item in their consumption; as a consequence of the price increase, the cost of living index jumped by 3.3%. Yet the comparatively moderate and ineffectual street demonstrations that followed the price announcement were led by students. There was no other leadership group around to lead them.

Fifth, much of the business community that had benefited from access to cheap loans and cheap foreign exchange was Chinese in ethnic origin. Relations between the Chinese community and the indigenous Indonesian community, never good at the best of times, were bound to worsen after 1965. With the failure of the September 30 coup and the widespread killings afterward, Mainland China changed from an ally of the Indonesian government -- and one that was willing to advance the cause of the resident Chinese community--to an opponent. As a consequence, the Chinese community lost some of its bargaining position within the Indonesian polity. Though certainly not powerless -- the April 1967 interest rate reductions are testimony to that power -- the Chinese business community was simply not in a position to press its interests as forcefully as earlier.
Sixth, the new government that took power in 1966 was certainly less anti-Western in its political outlook than the Sukarno regime had been. The stabilization program coincided with the views of the Western aid donors as to how a basis for economic growth in the Indonesian economy should be established. Had this aid not been forthcoming, it is most unlikely that the stabilization program could have been carried out as successfully and as quickly as it was.

As a summary and extension to these arguments, one might say that the September 30 coup failure and its aftermath had changed the nature of Indonesian politics. A new, explicitly military government came to power. Those who had benefited from the Sukarno politics were no longer in power, and their organizations were disbanded or rendered ineffectual. The political channels that had been built up during the previous fifteen years were in ruins, and in this vacuum the new government was able to carry out its stabilization program along orthodox or classical "liberal" lines in order to provide the foundation for a development program along liberal lines. The political and financial encouragement of the United States, Western Europe, the IMF, and the World Bank greatly facilitated this program.

As a final note to this section, it is worth mentioning that recent GDP estimates for 1970 indicate that real GDP at market prices grew by about 23% between 1966 and 1970.\textsuperscript{11/} This is a not unimpressive rate for an economy that was simultaneously going through a deflationary stabilization program.
Section II: The Recent History of the Foreign Exchange System

(1) The check-Price Over-Price System

Foreign exchange control in Indonesia has a long history, extending far back into the colonial regime. However, recent exchange control is usually traced back to the foreign exchange surrender law of 1940. The history of the Sukarno regime was largely one of over-valuation (despite multiple exchange rates), required surrender of export proceeds, and quantitative import and capital controls, with short periods of liberalization always followed by a re-application of controls when an import surge and/or capital flight threatened the balance of payments. Export "check prices" were developed as a control mechanism. These were a listing of the regime's guesses as to the actual export prices (denominated in foreign exchange) and therefore its demand for surrender of foreign exchange by exporters.

At the end of 1964, however, the notion of a legal "over-price" was established: a small margin of foreign exchange above the "check price" that could legally be held by private individuals. The check price was no longer just a guess about the actual export price and was now a potential tool for influencing the foreign trade sector. The next important step was taken in February, 1966, when the "Bonus Export" (BE) was established. The previous December, after the currency reform, the exchange rate was set at (new) Rp 10 = US$ 1, with compulsory surrender at that rate according to the check price. As inflation continued, this rate quickly became too low. To provide a greater incentive for export, in February the government permitted part of the check price to remain in the hands of exporters, in the form of "Bonus Export", that could be used directly for a limited list of "essential"
imports or sold in a free market to others for import. The 'BE' sold for 
Rp 43 = US$ 1. Exporters of major export commodities could keep 10%, 
exporters of minor commodities could keep 15%, and exporters of a small 
list of 'special' commodities (handicrafts and manufactures) could keep 
50%. In addition, exporters could keep whatever margin intentionally or 
unintentionally developed between the actual export price and the check 
price. This foreign exchange, known as 'complementary foreign exchange' 
(DP), sold for Rp 46.5 = US$ 1. Initially, its primary use was as a vehicle 
for capital export; it could also be used for a small list of 'non-essential' 
imports.

Thus, the effective exchange rate applicable to an export was 
directly dependent on five components: the relation of the check price 
to the actual export price (and thus the size of the over-price margin); 
the size of the BE cuota; and the levels of the official, BE, and DP 
(Soon after, explicit export taxes entered as a sixth component.) 
exchange rates. The BE and DP rates in turn, were dependent on the first 
two variables, the nature of the import regime and the demand for imports 
allowable under the two categories, and of course whether the government 
chose to intervene directly to affect the rates. This set of relationships 
can be represented by the following set of equations:

\[ R_F = P_{DP} \cdot (P_F - P_C) + P_{BE} \cdot P_C \cdot Q_{BE} \cdot R_{BE} \cdot P_C \cdot (1 - Q_{BE}) \]

\[ X = X (R_K, R_{DP}, Y_D, Y_F) \]

\[ M_{NE} = M_{NE} (P_{DP}, Y_D, Z, t_{NE}) \]

\[ M_{ES} = M_{ES} (R_{BE}, Y_D, Z, t_{ES}) \]

\[ M_G = \alpha \left( \frac{P_C}{P_F} \cdot (1 - Q_{BE}) \right) \]

\[ M_{NE} = X \left( \frac{P_F - P_C}{P_F} \right) \]
(7) \[ M_{ES} = X \cdot \left( \frac{P_C}{P_p} \right) \cdot Q_{BE} \]

(8) \[ X = M_C + M_{NE} + M_{ES} \]

(9) \[ T = X \cdot \left[ t_x \cdot P_{DP} \cdot P_C + (R_{DP} - R_o) \cdot P_C \cdot (1 - Q_{BE}) \right] + t_{NE} \cdot M_{NE} \cdot P_t + t_{ES} \cdot M_{ES} \cdot P_L \]

where:
- \( R_E \) is the effective exchange rate (average) for all exports
- \( R_{DP} \) is the DP exchange rate
- \( R_{BE} \) is the BE exchange rate
- \( R_o \) is the official exchange rate
- \( P_t \) is the exchange rate used for tariff evaluation
- \( P_C \) is the average actual export price
- \( P_{DP} \) is the average check price
- \( Q_{BE} \) is the average BE quota
- \( t_x \) is the direct export tax (if any)
- \( t_{NE} \) is the tariff on "non-essential" imports
- \( X \) is exports
- \( t_{ES} \) is the tariff on "essential" imports
- \( Y_D \) is all relevant domestic factors e.g., income, prices, etc.
- \( Y_F \) is all relevant foreign factors affecting export demand
- \( M_{NE} \) is "non-essential" imports
- \( M_{ES} \) is "essential" imports
- \( M_G \) is government imports
- \( Z \) is the import classification system
- \( T \) is the total explicit and implicit taxes on exports and imports.
The first equation is a statement of the effective exchange rate. The second represents the supply curve of legal exports; \( R_{DP} \) is a separate component of this function, since the difference between \( R_{DP} \) and \( R_E \) would influence the amount of export smuggling that would occur. Equations (3) and (4) express the demand for imports. Equations (5), (6) and (7) are the market clearing equations for each foreign exchange market. Equation (8) represents a simple summing of equations (5) - (7). And equation (9) is a statement of the effective tax revenue of the government.

The eight independent equations can be solved for the eight unknowns: \( R_{E}, R_{DP}, R_{BE}, X, M_{NE}, M_E, M_G \) and \( T \). The policy tools open to the government are \( P_C, Q_{BE}, R_o, R_t, Z, t \), and anything that effects \( Y_D \). The government would presumably have some preference function with \( M_{NE}, M_E, M_G \) and \( T \) as arguments; \( R_{DP} \) and \( R_{BE} \) might also enter it if these exchange rates were thought to be influential in the public's expectations about future inflation rates. The policy tools could be adjusted to achieve the optimum preference position.

The model can be used to trace through the complete effects of a particular policy action. Suppose one were interested in the effects of a change in the check price on essential imports. To get the "first round" effect on the supply of foreign exchange into the BE market, we would derive from equation (7):

\[
\frac{\partial^2 M_{ES}}{\partial P_C^2} = X \cdot \frac{1}{P_F} \cdot Q_{BE}
\]

But a change in the check price would affect the effective exchange rate, the overall level of exports, and thus essential imports.

Substituting equations (1) and (2) into (7), we get

\[
\frac{\partial^3 P}{\partial P C^3} = X \cdot \frac{1}{P_F} \cdot Q_{BE} \cdot \frac{P_C}{P_F} \cdot \frac{Q_{BE}}{P_C} \cdot \frac{3 X}{R_E} \cdot [-R_{DP}^* + R_{BE}^* \cdot Q_{BE}^*]
\]

\[
(1-\eta + R_o(1-Q_{BE}^*))
\]
Though the first term is positive, the second is negative, since \( R_{DP} > R_{BE} > R_0 \) and \( Q_{BE} < 1 \). We would be further interested in the adjustments in \( R_{BE} \) in equation (4) as a consequence of the increased supply of funds in the BE market and the effects that this change in \( R_{BE} \) would have on equations (1) and (2) and ultimately (7). Also, the change in \( P_c \) would affect the DP market and this too would affect equations (1), (2), and (7). The model is well designed to bring out these relationships, and I shall refer back to it in the narrative that follows.

Using the exchange rates and BE quotas cited above, we can compute the effective exchange rates applicable to exporters as of February 1966. Major commodity exporters tended to receive check prices that were close to actual export prices. If we assume a 90% check price, a major commodity exporter would have received an effective exchange rate of Rp 17 = US $1, or 37% of the DP exchange rate (which was roughly equivalent to the free market rate). Minor commodity exporters tended to receive more favorable check-prices. If we assume a check price of 70% of the actual export price, a minor commodity exporter would have received an effective exchange rate of Rp 24 = US $1, or 53% of the DP rate. These may appear to be low rates, but they were considerable improvements over the 6% ratio between the effective legal exchange rate and the free market rate that had prevailed in 1965 and the 24% effective free market ratio that had been the average for the 1960-1964 period. Table 7 shows the progression of the ratios of effective to free market exchange rates over time.

(2) Developments in 1966

As the general price level rose rapidly during 1966, the official exchange rate of Rp 10 became increasingly overvalued. If exporters were
Table 7: Effective Exchange Rates, as a Percentage of Free Market Rates, 1966-197

<table>
<thead>
<tr>
<th></th>
<th>A list&lt;sup&gt;a&lt;/sup&gt;</th>
<th>B list&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Total exports&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Free Market Exchange Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966-Feb.</td>
<td>37%</td>
<td>52%</td>
<td>40</td>
<td>Rp</td>
</tr>
<tr>
<td>-May</td>
<td>33</td>
<td>70</td>
<td>40</td>
<td>97.5</td>
</tr>
<tr>
<td>-Nov.</td>
<td>56</td>
<td>73</td>
<td>60</td>
<td>95</td>
</tr>
<tr>
<td>1967-I</td>
<td>56</td>
<td>76</td>
<td>60</td>
<td>116</td>
</tr>
<tr>
<td>II</td>
<td>59</td>
<td>81</td>
<td>63</td>
<td>136</td>
</tr>
<tr>
<td>III</td>
<td>69</td>
<td>88</td>
<td>74</td>
<td>158</td>
</tr>
<tr>
<td>IV</td>
<td>70</td>
<td>91</td>
<td>76</td>
<td>187</td>
</tr>
<tr>
<td>1968-I</td>
<td>72</td>
<td>92</td>
<td>77</td>
<td>289</td>
</tr>
<tr>
<td>II</td>
<td>68</td>
<td>88</td>
<td>74</td>
<td>333</td>
</tr>
<tr>
<td>III</td>
<td>64</td>
<td>86</td>
<td>70</td>
<td>388</td>
</tr>
<tr>
<td>IV</td>
<td>69</td>
<td>84</td>
<td>73</td>
<td>437</td>
</tr>
<tr>
<td>1969-I</td>
<td>76</td>
<td>86</td>
<td>78</td>
<td>396</td>
</tr>
<tr>
<td>II</td>
<td>78</td>
<td>88</td>
<td>80</td>
<td>380</td>
</tr>
<tr>
<td>III</td>
<td>78</td>
<td>88</td>
<td>80</td>
<td>378</td>
</tr>
<tr>
<td>IV</td>
<td>79</td>
<td>88</td>
<td>81</td>
<td>378</td>
</tr>
<tr>
<td>1970-I</td>
<td>79</td>
<td>88</td>
<td>81</td>
<td>378</td>
</tr>
<tr>
<td>1970-II and subsequent</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>378</td>
</tr>
<tr>
<td>1971-III</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>415</td>
</tr>
</tbody>
</table>

- The "A" list was composed of rubber, copra, coffee, tobacco, palm oil, palm kernels, pepper, and tin. Before July 1967, tea, sisal, and sugar were also in this group. The "B" list was composed of virtually all other exports, except petroleum, which was subject to its own regime. A very small quantity of handicrafts and manufacturers had higher effective exchange rates before July 1967 and have been exempted from the 10% export tax since April 1970.

- Excluding petroleum.

Sources: Glassburner (1970); Bank Indonesia figure.
going to be able to export legally and profitably, their effective exchange rates had to be increased. The government faced a two part decision: whether to increase the effective exchange rates and, if so, how to do it. In essence, however, the decision about whether to increase the effective exchange rates had been made affirmatively in February when the BE system had been set up. I suspect that the sheer rate of inflation -- 400-600% per year -- and the potential and actual ease of export smuggling made this affirmative decision easier. I shall return to this question in Section IV.

Further, the government had to decide if it would use the policy tools outlined in the model above or try to intervene directly in the foreign exchange markets to set the exchange rates. It decided to refrain from direct intervention. Again, I suspect the two factors cited above were influential.

The government was reluctant to abandon the official exchange rate of Rp 10, since this was the rate at which government departments and enterprises bought their imports. Effectively, this was a convenient tax which the government was unwilling to give up. But the economy was concurrently being decontrolled and the import regime being loosened. Government responsibility for imports was being reduced and greater responsibility was being given to the private sector. Quantitative controls for both essential and non-essential imports were being removed. This meant a greater demand for BE and DP foreign exchange and a greater upward push on these exchange rates, in addition to the push that inflation itself would provide. Though higher BE and DP rates improved the effective exchange rate for exporters, these rates could provide a significant improvement only
if they rose very high -- which increased the incentive for smuggling. Accordingly, the government increased the BE quotas for exporters, requiring them to surrender a smaller portion of the check-price at the official exchange rate. By October 1966 the BE quotas had been raised to 50%, 75%, and 90% of the check-price for the major, minor, and "special" export categories, respectively. This was, of course, consistent with the government's decreased importing role and decreased need for foreign exchange. Implicitly, however, the government was losing tax revenue, since it could have continued to have required surrender at Rp 10 and could have sold the foreign exchange it did not use in the BE and DP markets. Partially to make up this loss, the government in May 1966 instituted an export tax (ADO) which would be given directly to the provincial government of the port of export. This was to provide the provincial governments with an assured source of revenue and also provided them with an incentive to crack down on smuggling. Initially the ADO tax was set equal to the BE quota for each category of export. In October, the ADO was standardized to a flat 10% of the check-price on all commodities.

By November 1966, then, the effective exchange rates for exporters had increased considerably. The BE and DP rates had more than doubled from their February levels. Chart 2 shows the progression of exchange rates over time. The BE quotas had been increased. Partially offsetting this was the new ADO tax. Still, a major commodity exporter with a 90% check-price in November received an effective exchange rate of Rp 53 = US $1, or 56% of the DP rate. A minor commodity exporter with a 70% check-price received Rp 74 = US $1 or 78% of the DP rate. The lot of the exporter had definitely improved.
More importantly, the commitment to a more-or-less floating dual exchange rate had been made. Quantitative controls were being rapidly dismantled. The import regime was largely open, with tariffs and access to credit serving as the main restrictive mechanisms. The latter, in particular, was important, since suppliers' credits were frequently not available or permitted and an importer had to buy the foreign exchange and give it to his bank at the time the import letter of credit was opened. For imports from Europe and North America, there could be a period of three to four months between the letter of credit opening and the arrival of the goods. Further, as mentioned in Section I, there were at times requirements for pre-payment of import duties at the time of the opening of the letter of credit. Finally, capital controls were being unwound. This action was rewarded with a $50 million net capital inflow in 1966 and a $100 million net inflow in 1967 (See Table 5). These figures compare to an average net inflow of $12 million in the previous six years.

Through 1966 until mid-1968, there appears to have been a constant conflict within the government over the nature of the check-price/over-price relationship. Over-price had originally been envisaged as a small margin, to be used by exporters mainly for contingencies. The DP market was to be kept small, since 'non-essential' imports were to be kept small, as were the "non-essential" services that could be purchased with DP exchange. The DP market was to be fed from these small exporter over-price margins, receipts from services (e.g., hotels), and capital inflows. Over-price margins tended to widen, however, as officials in the Ministry of Trade realized that this was an effective way of raising returns to exporters and thereby discouraging smuggling. Also, the increased supply of DP exchange served as a drag on the
DP exchange rate and narrowed the spread between the BE and DP rates, further discouraging smuggling. But periodically the central government would decide that overprice margins had grown too large and would announce that they would be cut back to narrow levels. This would be done and then the margins would gradually widen again. Also, over-price margins inevitably had to fluctuate as the international prices of export commodities fluctuated. Only extra-ordinary agility by the Ministry of Trade in changing check prices in line with international price changes could have prevented these varying over-price margins. This conflict between the desire to keep the DP market small and the desire to ensure adequate effective exchange rates for exporters persisted until mid-1968. Finally, in June 1968 after the "Development Cabinet" had taken office, the government officially recognized that over-price would be a tool of export encouragement and would not necessarily be kept to a small margin.

(3) Developments, 1967-1971

Through early 1967 minor changes in the check-price system continued to be made, and the effective exchange rates to exporters continued to improve, as seen in Table 7. Two other exchange rates entered the system. As foreign aid began to flow again into Indonesia, this 'foreign exchange' had to be given a price. Since the aid was frequently tied and thus worth less than ready cash, it had to be priced lower than ready cash. The government chose to sell it at a 10-20% discount from the rate set in the BE market, adjusting the aid exchange rate roughly in line with BE movements. The movement of the aid exchange rate is shown in Chart 2. The difficulties of aid pricing will be discussed in Section IV. The second separate exchange rate was the one applicable to oil transactions. This was originally set in July 1966 at Rp 10.
In March 1967 it was raised to Rp 85. The oil rate tended to be below the BE and DP rates, as seen in Chart 2. Since foreign-owned oil companies tended to be net sellers of foreign exchange, the low oil rate was an extra tax on their operations; since the state oil company P.N. Pertamina, tended to be a net buyer of foreign exchange, this was a subsidy for it.

In July 1967 another major change was made in the system. The official exchange rate of Rp 10 was abolished. Exporters were now to receive the BE rate for the full check-price value of their exports, less the 10% ADO tax and, for most, a new 15% export tax that would go directly to the central government. "A" list commodities—rubber, copra, coffee, tobacco, palm oil, palm kernels, pepper and tin—were subject to the new 15% tax; these exports accounted for 75% of non-oil exports. (In October 1968 this tax was lowered to 3%). The remaining "B" list exports were exempt from the new tax but still subject to the ADO tax. In the terms of equation (1) of the model above, \( Q_{BE} = 1, t_x = 0.25 \) for "A" list and \( t_x = 0.10 \) for "B" list, the next to last term disappeared and \( R_{BE} \) became the exchange rate in the last term. The effects of this on exporters effective exchange rates can be seen in Table 7. Further, government imports were now to be made at the BE exchange rate. Finally, exporters were now required to sell their BE exchange immediately to the foreign exchange market. Previously, exporters had been allowed to hold the BE exchange for various lengths of time before selling in the BE market. They were now required to surrender it to the central bank, but at the rate set by the demand and supply in the BE market.

At the end of 1967 the reduced level of the dry season rice harvest caused a sharp rise in domestic prices. The price of rice in
Djakarta doubled between December 1967 and January 1968. Both the BE and DP exchange rates rose sharply. The government, concerned about the rise in the BE rate and its possible cost-push effects on the domestic price level, entered the BE market in January and sold some of its own foreign exchange. This achieved an immediate 10% fall in the BE rate, but as the general price level continued to increase, so did the BE rate. Again, the government had shown its willingness to allow market mechanisms to work, choosing to intervene through the market rather than to disrupt the market.

In late May 1968 the special BE aid exchange rate was abolished, and aid foreign exchange was sold at the same rate as cash BE. Special credit terms were provided to make the aid foreign exchange sufficiently attractive. But aid commitments from donors were slow in 1968, and pressure on Indonesia's free foreign exchange was increasing. In July, to "save foreign exchange," the government stopped all cash BE sales, providing only aid BE to importers. The effects on the DP market were predictable: importers rushed into the DP market to try to buy foreign exchange for goods that were not available through aid, and the spread between the BE and DP rates widened from 17% in June to 40% in July. After three weeks of this form of intervention, the government was persuaded to resume its cash BE sales.

The DP rate continued to rise, primarily fed by speculation. It reached a peak of Rp 490 in October 1968. Nevertheless, in that month the government felt it had the inflation and foreign exchange situation well enough in hand to stabilize the BE rate at Rp 326 and simultaneously try to bring down the DP rate. Both actions were carried out through market sales of foreign exchange by the Central bank. Also, the high rates of interest offered on time deposits in October probably encouraged
some capital inflow and brought downward pressure on the DP rate. The DP rate was in fact brought down, and it was stabilized at Rp 378 in March 1969. Both actions were meant to be indicators of the stability of the economy and the determination of the government to maintain that stability.

But stable rates could be held only as long as the balance of payments remained favorable. In the last quarter of 1969 the balance of payments came under pressure, with sizable losses of reserves. Decreased export earnings, caused primarily by a drop in the international price of rubber, and somewhat expanded imports, due mostly to commercial imports of rice by the government, were the prime causes of reserve losses.

The balance of payments pressure continued in early 1970, and in April the government made its last fundamental change in the foreign exchange system. The dual exchange rate was basically ended. All non-aid transactions were standardized at Rp 378. For the 51% of imports that were imported at the BE rate from non-aid sources, this represented a 15% devaluation (In 1969, imports broke down roughly as follows: oil company related, 10%; aid BE 20%; cash BE, 51%, DP, 11%). Also the oil exchange rate was finally unified with the other exchange rates.

On the export side, the unification of the exchange rate meant the end of the check-price/over-price system. All exports were now to receive Rp 378 per US $1, less a 10% export tax. (The additional 5% tax on 'A' list products was abolished). This tax was no longer allocated directly to the provincial governments. Instead the provincial governments received direct grants from the central government; initially, these grants were set at 105% of the former provincial export tax receipts. The direct allocation of the export tax to the province of export had been criticized on the grounds that it encouraged excessive construction of port facilities and roads by provinces
in their efforts to make sure that exports originating in the province
directly
were also exported/from the province.

These measures had the effect of raising the effective exchange
rate for exports to 90% of the nominal exchange rate. The only exception
to the exchange rate unification was the aid exchange rate, which remained
at Rp 326. In December 1970 the aid rate too was raised to Rp 378, with
credit arrangements again being relied on to "move" the aid.

In August 1971, as pressure again developed on the balance
of payments and in the wake of the US dollar float, Indonesia devalued
by 10% to Rp 415 = US $1. As part of that action, the government decided
to price aid imports officially at Rp 415 but to offer differential rebates
or subsidies, as needed, to help move the aid imports of different
countries. At the end of August the foreign exchange system was in the
state described in Section III.
III. The Present Foreign Exchange System

As indicated in Section II, Indonesia currently operates what is basically an open foreign exchange system. The nominal exchange rate is RP 415 = US$1, and all transactions take place at that rate. The exchange rate is not officially pegged, but since late 1968 the policy of the Bank Indonesia has been to stabilize the exchange rate at a particular level (which has changed twice) through purchases and sales in the foreign exchange market.

Most exports are subject to a 10% export tax, bringing the effective exchange rate for exports down to Rp 374. Manufactured exports and handicrafts are exempt from the 10% tax, but these items accounted for less than 1% of Indonesian exports in 1970. (Semi-processing of raw materials like rubber or copra does not count as manufacturing.) Also, petroleum and petroleum products are exempt from the tax; these exports are the special concern of the state-owned oil company, and special transfers from the company are allocated to the central treasury. In the 1970/71 budget year, export taxes brought in Rp 30.4 billion, or 9% of the central government’s tax receipts.

Many raw materials which leave a province (there are 26 provinces) have to pay an absolute levy, the cess, whether the raw materials are destined for export or for other provinces, and copra, coffee, and pepper are also subject to rehabilitation fund levies. In the past, the sum of these levies has gotten as high as 15% (on copra), though it was only 1% on rubber. Since most rubber is exported, the rubber cess was effectively an additional export tax. For most other materials, like copra, coffee, and spices, there are substantial domestic demands, and the materials tend to move from one province to another, so there is no direct discrimination against exports. As part of the August 1971 devaluation package, the rubber cess was removed, the copra and coffee cesses were halved, and the rehabilitation fund levies were substantially reduced. The effective tax from the cess and...
<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber</td>
<td>$270</td>
</tr>
<tr>
<td>Petroleum</td>
<td>434</td>
</tr>
<tr>
<td>Lumber</td>
<td>125</td>
</tr>
<tr>
<td>Coffee</td>
<td>71</td>
</tr>
<tr>
<td>Tin</td>
<td>62</td>
</tr>
<tr>
<td>Palm oil</td>
<td>38</td>
</tr>
<tr>
<td>Copra</td>
<td>30</td>
</tr>
<tr>
<td>Tea</td>
<td>19</td>
</tr>
<tr>
<td>Tobacco</td>
<td>12</td>
</tr>
<tr>
<td>Tapioca</td>
<td>9</td>
</tr>
<tr>
<td>Copra Cakes</td>
<td>7</td>
</tr>
<tr>
<td>Hides</td>
<td>6</td>
</tr>
<tr>
<td>Palm Kernels</td>
<td>5</td>
</tr>
<tr>
<td>Pepper</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>82</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1173</strong></td>
</tr>
</tbody>
</table>

a/ Because the check price values were appreciably below the true export values for the first three months of 1970, the actual export values must necessarily be guesses.


rehabilitation funds is now 0% on rubber, 6% on copra, 5% on coffee, and 1.5% - 2.0% on pepper.

Table 8 shows the approximate levels of the different Indonesian exports for calendar year 1970. About 60% of the total is accounted for by two categories: petroleum and rubber. The addition of three more categories,
lumber, tin, and coffee, brings the percentage to over 80%. This is a high level of concentration, by any definition. The remaining 20% is composed of a scattering of other raw materials. The only manufactured export large enough to rate a separate listing in government export statistics is $2.3 million worth of handicrafts.

Most imports are subject only to the restraints of import duties. The Indonesian import duty schedule is the usual cascaded hodgepodge found in most developing and developed countries. Capital goods bear duties of 0–30%, raw materials pay between 0 and 70%, semi-finished products bear duties of 30–120%, and consumer goods pay between 30% and 300%. A few basic foodstuffs, like rice and wheat flour, have a zero duty. On an unweighted basis, import duties average 55%. Weighted by total imports for calendar year 1970, import duties averaged 14%; if the major duty-free items of rice, wheat flour, fertilizer, and oil company-related imports, are excluded from the total, import duties averaged 18%. Government agencies are expected to pay duties on their imports, just like other importers. In addition to import duties, sales taxes are levied on imports, at rates of 0, 5, 10, 20, or 50%. A separate sales tax schedule applies to domestically produced goods. Though the rates on domestic and imported items are frequently consistent, there are differences and even cases in which the domestic product is taxed more heavily than the import. In the 1970/71 budget, import duties brought in Rp 70.7 billion and the import sales tax brought in another Rp. 22.1. Together, they accounted for 27% of tax receipts. If export taxes are added, all taxes on trade accounted for 36% of budgetary tax receipts.

Table 9 provides a rough breakdown of imports in 1970 as provided by Bank Indonesia. A few items from the table are worth noting. First, rice and wheat flour imports totaled $170.3 million, or 13% of the total
Table 5: Imports, 1970 (millions of dollars, C.I.F.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>$111.2</td>
</tr>
<tr>
<td>Wheat flour</td>
<td>59.1</td>
</tr>
<tr>
<td>Textiles</td>
<td>32.7</td>
</tr>
<tr>
<td>Cambrics and sheeting</td>
<td>4.5</td>
</tr>
<tr>
<td>Motor cars</td>
<td>14.9</td>
</tr>
<tr>
<td>Other consumer goods</td>
<td>145.4</td>
</tr>
<tr>
<td><strong>Total consumer goods</strong></td>
<td><strong>$367.8</strong></td>
</tr>
<tr>
<td>Cloves</td>
<td>20.7</td>
</tr>
<tr>
<td>Chemicals</td>
<td>53.6</td>
</tr>
<tr>
<td>Chemical products and preparations</td>
<td>11.5</td>
</tr>
<tr>
<td>Paint materials</td>
<td>16.4</td>
</tr>
<tr>
<td>Fertilizer</td>
<td>22.5</td>
</tr>
<tr>
<td>Paper</td>
<td>23.5</td>
</tr>
<tr>
<td>Weaving yarns</td>
<td>35.6</td>
</tr>
<tr>
<td>Cement</td>
<td>14.2</td>
</tr>
<tr>
<td>Iron and steel products</td>
<td>40.9</td>
</tr>
<tr>
<td>Other raw materials</td>
<td>146.5</td>
</tr>
<tr>
<td><strong>Total raw materials</strong></td>
<td><strong>$385.4</strong></td>
</tr>
<tr>
<td>Iron and steel pipes</td>
<td>9.9</td>
</tr>
<tr>
<td>Machinery and engines</td>
<td>39.5</td>
</tr>
<tr>
<td>Buses and trucks</td>
<td>52.0</td>
</tr>
<tr>
<td>Other capital goods</td>
<td>278.1</td>
</tr>
<tr>
<td><strong>Total capital goods</strong></td>
<td><strong>$379.5</strong></td>
</tr>
<tr>
<td>Imports for Oil Companies</td>
<td>102.0</td>
</tr>
<tr>
<td>Unclassified (estimated)</td>
<td>28.0</td>
</tr>
<tr>
<td><strong>Total Imports</strong></td>
<td><strong>$1262.7</strong></td>
</tr>
</tbody>
</table>

import bill. However, most of these foodstuffs were provided through foreign aid on free or very easy (e.g., PL480) terms. Second, colored and uncolored textile imports came to $36.9 million: also a sizable fraction of the unclassified imports were probably textiles. This sizable level of textile imports into a country with industrial wages that are among the lowest in the world is a good indicator of the low level of industrialization of the country. Third, the line item for cloves is no misprint. Though Indonesia is a major producer of cloves, the local cigarette industry, which is the major domestic user of cloves (for special clove-flavored cigarettes), prefers imported cloves from Zanzibar.

Since there is no exchange control, Indonesians and foreigners alike are free to buy, sell, and hold foreign exchange. Though exporters are required to turn in their foreign exchange proceeds to the Central Bank upon receipt, this is mainly for tax recording purposes. The exporters are free to buy back the foreign exchange, paying the small difference between the Bank's buying and selling rates. In essence, the provision adds a minor tax (roughly 1/2%) to export transactions. Foreign investment is welcomed, though all foreign investment schemes must be approved by a government agency, the Foreign Investment Board. (See Part IV).

There are some exceptions to the picture of an open economy described above. A handful of exports are prohibited: low quality rubber from some parts of Indonesia (Kalimantan); gold and silver and their ores; iron, brass, and copper scrap; and cultural antiquities. Only the rubber provision is economically important. It is designed to improve Indonesia's image as a high quality exporter and is also designed to encourage domestic remilling and crumb rubber operations in particular areas. Rubber remillers and crumb rubber factory owners in other areas (e.g., Sumatra) have been urging the
government to extend the ban to their areas.

Second, copra exports from Sulavesi and the Malukus (these areas account for 90% of Indonesia's copra exports) are under the direction of the Ministry of Trade, through its Copra Management Board. Copra exports in this area have had a history of informal local taxes. The consequences were a reduction in financial yields to small-holder copra farmers, neglect of copra growing areas and the absence of replanting, and a decline in copra exports. In efforts to change this situation, the Copra Management Board was set up in August 1969. It licenses who can engage in copra export and inter-island trade, how much they may ship, where they must buy, and where they must sell. At the same time, the Board has made strenuous and largely successful efforts to eliminate the informal local taxes and is trying to ensure that formal local taxes (e.g., the cess and a special Board levy) do get spent on infrastructure related to copra. Returns to copra farmers do seem to have improved, and the buying and selling restrictions have not proved very onerous so far. Still, there does seem to be room for a less restrictive system that would still yield benefits for copra farmers.

There are more exceptions on the import side, and they are more important. First, there are five commodities the import of which has been reserved exclusively to government agencies. These are rice, wheat flour, cotton, fertilizer, and sugar. These five commodities accounted for roughly 18-20% of total imports in 1970. Some reasons can be offered for the government's desire to retain exclusive import rights to the commodities. Rice and wheat flour imports are crucial to the government's program of rice price supports, price stabilization, and long-term self-sufficiency. The government believes that it has better information and is better equipped on the logistics of the program than are private traders, and the government considers
its program so crucial that it is not willing to leave these imports to the vagaries of the private sector. Also, these imports are largely bought through aid money, and by retaining control over these imports the government can minimize the hard foreign exchange that is spent on them. Though the minimization could also be achieved by differential pricing of the aid foreign exchange, donors frown on such practices (e.g., the U.S. government's requirement that PL480 imports be sold at the dominant rate of exchange). Cotton is imported exclusively under PL480, and the government has considered it easier, for the above reason, to retain exclusive control. The Ministry of Trade has exclusive import rights for fertilizer, because of an incident a few years ago in which an unauthorized individual in the government ordered from a foreign producer a large amount of fertilizer at an unfavorable price. The government felt itself obligated to honor the commitment, but to prevent the recurrance of the incident it restricted fertilizer imports to the Ministry of Trade.

There is no good reason for the sugar restriction, but Indonesia is not alone in intervening in the sugar market. There seem to be few countries, developed and less developed alike, that do not actively intervene in the sugar market.

Second, a number of imports are banned entirely. Table 10 lists these items. Until August 1970, only the first five items were banned. In the last few months of 1970, in response to protectionist pressures from local manufacturers, the government put the remaining items on the list. Not too surprisingly, all but three of the items are consumer goods. At the moment, the economic effect of the bans are probably small, and there has been no inclination on the part of the government to expand the list since November 1970. Nevertheless, the precedent may be an unhappy one.

As a conclusion to this section, Table 11 offers the annual balance of payments figures for the past five years. Recorded exports have grown by
65% over this period, and recorded imports have grown by 88%. The real rises have probably been somewhat less, since smuggling of both exports and imports has surely decreased over this period. Aid flows, both gross and net, have increased substantially. In 1970, gross aid flows financed 30% of total imports (including transportation). That same gross aid inflow amounted to 4% of Indonesian GNP and probably represented slightly over a third of gross capital formation.

Table 10: Banned Imports, as of July 1971

Batiks and batik-motif cloth
Printed matter in the Indonesian language
Vehicle tires of certain sizes
Fully assembled commercial vehicles (into Java and Sumatra)
Used bottles
Dry cell batteries of certain sizes
Striped cotton cloth
Galvanized iron sheets
Ungalvanized iron sheets
Built-up radios and TV's
Semi-knocked-down radios and TV's
Canned condensed milk
Lamps and bulbs of certain sizes
Built-up motorcycles
Mosquito incense

Source: Ministry of Trade
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exports, FOB</strong></td>
<td>$714</td>
<td>$770</td>
<td>872</td>
<td>995</td>
<td>1173</td>
</tr>
<tr>
<td>Oil</td>
<td>215</td>
<td>244</td>
<td>303</td>
<td>366</td>
<td>434</td>
</tr>
<tr>
<td>Non-oil</td>
<td>499</td>
<td>526</td>
<td>569</td>
<td>629</td>
<td>739</td>
</tr>
<tr>
<td><strong>Imports, FOB</strong></td>
<td>-604</td>
<td>-805</td>
<td>-831</td>
<td>-993</td>
<td>-1138</td>
</tr>
<tr>
<td>Oil companies</td>
<td>-68</td>
<td>-68</td>
<td>-80</td>
<td>-87</td>
<td>-92</td>
</tr>
<tr>
<td>Other</td>
<td>-536</td>
<td>-737</td>
<td>-751</td>
<td>-906</td>
<td>-1046</td>
</tr>
<tr>
<td><strong>Transportation and Travel</strong></td>
<td>-88</td>
<td>-120</td>
<td>-133</td>
<td>-148</td>
<td>-193</td>
</tr>
<tr>
<td><strong>Investment Income</strong></td>
<td>-47</td>
<td>-63</td>
<td>-78</td>
<td>-107</td>
<td>-133</td>
</tr>
<tr>
<td><strong>Government, n.i.e.</strong></td>
<td>-35</td>
<td>-23</td>
<td>-23</td>
<td>-18</td>
<td>-20</td>
</tr>
<tr>
<td><strong>Other services</strong></td>
<td>-88</td>
<td>-79</td>
<td>-91</td>
<td>-123</td>
<td>-128</td>
</tr>
<tr>
<td><strong>Special Drawing Rights</strong></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Private capital (net)</strong></td>
<td>50</td>
<td>100</td>
<td>33</td>
<td>55</td>
<td>109</td>
</tr>
<tr>
<td><strong>Short-term Loans Against Oil Revenues</strong></td>
<td>---</td>
<td>-13</td>
<td>+12</td>
<td>+9</td>
<td>-30</td>
</tr>
<tr>
<td><strong>Reparations</strong></td>
<td>15</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Gross Aid</strong></td>
<td></td>
<td>273</td>
<td>298</td>
<td>325</td>
<td>366</td>
</tr>
<tr>
<td><strong>Debt Repayment</strong></td>
<td>51</td>
<td>-54</td>
<td>-75</td>
<td>-40</td>
<td>-66</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>30</td>
<td>9</td>
<td>32</td>
<td>8</td>
<td>-28</td>
</tr>
<tr>
<td><strong>Balance on Capital flow</strong></td>
<td>+146</td>
<td>+341</td>
<td>+276</td>
<td>+339</td>
<td>+446</td>
</tr>
<tr>
<td><strong>Net IMF position</strong></td>
<td>---</td>
<td>-14</td>
<td>15</td>
<td>48</td>
<td>26</td>
</tr>
<tr>
<td><strong>Other short-term Liabilities</strong></td>
<td>---</td>
<td>---</td>
<td>-3</td>
<td>7</td>
<td>-23</td>
</tr>
<tr>
<td><strong>Short-term Assets(-increase)</strong></td>
<td>11</td>
<td>23</td>
<td>---</td>
<td>-35</td>
<td>-38</td>
</tr>
<tr>
<td><strong>Monetary Gold</strong></td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Balance on Monetary Movements</strong></td>
<td>+11</td>
<td>+9</td>
<td>+12</td>
<td>+20</td>
<td>-35</td>
</tr>
<tr>
<td><strong>Errors and Omissions</strong></td>
<td>-9</td>
<td>-30</td>
<td>-4</td>
<td>+35</td>
<td>28</td>
</tr>
</tbody>
</table>

Section IV: Analysis and Problems

This section will draw on the discussion of the previous three sections and will analyze the effects that the foreign exchange system has had on the Indonesian economy and the problems that it has created. A number of themes will be discussed: the question of why quantitative controls have largely been avoided; the nature of the operation of the system; tariffs and effective protection; allocation effects; export incentives; pricing foreign aid; and foreign investment problems.

1. The Lack of Quantitative Restrictions

There is no single reason why Indonesia has largely avoided quantitative restrictions since 1965. Rather, a number of mutually reinforcing arguments have led Indonesian policy-makers to these policies.

First, the widespread breakdown and clear failure of the Sukarno régime's direct controls was a clear and powerful demonstration of the potential difficulties of a system of QR's. The import licensing cum overvalued exchange rate had generated widespread export and import smuggling, exacerbated corruption problems within the government, contributed to the construction of inefficient or inappropriate factories, and created serious raw materials and spare parts shortages throughout the economy. Current industrial surveys of Indonesia are filled with references to inactive factories, which either should never have been constructed in the first place or which had been cannabalized for spare parts or simply neglected because of non-availability of foreign exchange. By 1965 the economic fabric of the society had disintegrated, largely because of the inflation, but the direct controls and their consequences had certainly exacerbated the situation. The lessons of Sukarno's direct controls were clear and surely made it easier for the new regime to
move away from direct controls. This is not to argue that every society needs or ought to go through the economic wringer that Indonesia experienced between 1964 and 1967, but it certainly did make it easier for policy makers to adopt different policies.

Second, the rapid pace of the inflation itself in 1966 made direct controls and an overvalued exchange rate a patently unworkable policy. With inflation rates of 10%, 20%, or perhaps even 50% per year, policy makers might try to maintain direct controls with a fair amount of success. But with an inflation rate of 400-600% per year, any pegged exchange rate would very quickly become unrealistic, and exports would either cease or enter smuggling channels. Government policy was sure to be frustrated. Some form of floating exchange rate was the only realistic policy in the face of that inflation.

This argument is reinforced by the pre-1966 experience. With direct controls and an accelerating inflation, recorded exports declined significantly in 1962-65 from earlier levels. It is most likely that most of this apparent decline was a diversion of exports into smuggling channels. It was common knowledge that substantial amounts of exports were being smuggled. The local wholesale prices of export commodities were sometimes in excess of their export values converted at the legal (unfavorable) exchange rate. This phenomenon could have been due to temporary dips in the international price to which the local price had not yet adjusted, but it was more likely due to the demand of exporters who were smuggling and therefore could afford to pay a high domestic price for the commodities. One estimate has put Indonesian export smuggling at $140-$200 million or more per year between 1958 and 1962. The high figure would have represented a quarter of all exports, a third of non-oil exports. It is likely that these smuggling levels persisted or grew through the middle 1960's.
(Since smuggling will be mentioned frequently in the pages that follow, it is important to make clear what is meant by the term. Though some export and import smuggling has taken place via the "motorboat in the middle of the night" route, most of it seems to have occurred through false declaration of goods and under-valuation. This has been done with or without the connivance of the customs officials. There even appear to be some instances in which imports have been declared and recorded but duties have not been paid. In the past few years, the Ministry of Finance has taken considerable effort to tighten up the customs service. In April 1971 salaries were increased eight-to ten-fold, from levels that had been as low as $20 a month; some customs officials who persisted in their former ways were dismissed. The initial response has been good.)

Third, most of the new policy makers were ideologically favorable toward policies involving less direct controls. Many of the "technocrats," as the new ministers and their advisers came to be called, had been trained in the United States in economics during the 1950's and early 1960's, when the services of economists were neither required nor desired by the Sukarno regime. These were men who were sympathetic toward markets and the results that markets yielded. Their orientation was certainly not complete laissez faire, but they were much more inclined to avoid direct controls and to intervene through the market rather than by-pass the market.

Fourth, the aid donors were favorably inclined toward an open foreign exchange system. It is certainly debatable as to whether the aid flows and commitments would have been forthcoming in the same magnitudes if the direct controls of the pre-1965 era had continued.

Fifth, the government had a revenue interest in a floating exchange rate. As noted above, about a third of government revenues come from trade
taxes. If the exchange rate were pegged at an over-valued rate and the scarcity premium of foreign exchange were not captured through tariffs or license auctions but instead the licenses were simply handed out, the government would have lost potential revenue. With rapid inflation going on, this revenue loss could quickly become substantial. Further, to the extent that licensing and over-valuation drove exports/into smuggling channels, the government would lose revenues. Export and import smuggling flows of $200 million per year each way could mean a large amount of lost revenue. Government revenues, then, did depend on keeping the effective exchange rates to exporters within a reasonable distance of the free market rate.

There seems to have been, however, some asymmetry with respect to smuggling fears. Though fears of export smuggling were probably influential in keeping the exchange rates realistic and improving the relative returns to exporters, the likelihood of import smuggling did not prevent the government from establishing the import duty structure described in Section III, with duties extending up to 300%. This duty structure has definitely encouraged import smuggling. While export smuggling has virtually ceased because of the narrowing of the gap between FOB prices and exporter receipts, import smuggling continues to be a problem for Indonesia.

Sixth, there were no strong pressure groups in whose interests it was to keep the exchange rate low. There were no substantial manufacturing interests who were willing to push for cheap imports of raw materials and capital goods. Again, as in the inflation-stabilization question discussed in Section I, the failure of the September 30 coup and the establishment of the new government in 1966 meant a change in the political power structure of Indonesia, and many of those who had benefitted from access to licenses and cheap imports were no longer in a position to push their interests.
Still, import prices were an important political factor. Though imports amounted to less than 10% of GDP, there were a number of items in most consumers' key consumption bundle which were imported at least in part: rice, wheat, flour, sugar, and textiles, and coconut cooking oil (which was exported and therefore the price of which was influenced by the exchange rate). Thus the temptation to try to stabilize domestic prices by keeping the exchange rate low was present. Until early 1968, the Government was directly or indirectly subsidizing a number of key consumption items through imports and concessional sales. But even these subsidized prices did rise during the period of inflation. The prices of goods and services produced by government agencies -- kerosene and gasoline, electricity, railroad tickets and airline tickets -- were raised during the inflation at sporadic intervals. Overall, the level of subsidies was being reduced. In the wake of the late 1967-early 1968 inflationary spurt due to the poor rice harvest, most of the subsidies were ended or severely reduced. In early 1968 the government did temporarily succumb to the temptation to try to keep the exchange rate low, but it quickly found that it did not have enough reserves to maintain the rate, and it was not willing import direct controls.

Generally, then, stable prices were important, but so was maintaining a realistic exchange rate for exporters and reducing subsidies in the government budget. In the end, the policy-makers realized that controlling the inflation meant ensuring adequate rice supplies for the country from domestic and foreign sources and that excessive subsidies which created budget deficits or exchange rates which encouraged export smuggling would prove self-defeating.
2. Operation of the System

Some further discussion of the operation of the system is warranted. First, until April 1970 the system operated through dual exchange rates. Multiple exchange rates sometimes carry a connotation as a less "clean" or "respectable" protective device than tariffs or export taxes. This is certainly the impression that one gets from IMF policy efforts. In this light, it is worth stressing that the Indonesian dual exchange rates were simply a way of supplementing the incentives and disincentives of the trade taxes. The Indonesian policy makers found this to be an efficient and reliable way of achieving these effects. The dual exchange rates were essentially an extra tax on exports and a subsidy on some imports that were levied and administered by the Bank Indonesia. The Bank was considered to be a more reliable agency to enforce these supplementary effects than was the customs agency. Of course, ultimate enforcement was still dependent on physical inspection of the exported or imported goods by customs, to make sure that the actual goods corresponded to those for which the foreign exchange had been bought. In one celebrated case in 1968, a group of traders bought foreign exchange at the BE rate and had allies ship empty boxes from Singapore. After suitable payoffs the traders were able to sell most of the exchange at the DP rate for a profit. Still, the Bank did add an extra check on the honesty of the system, and generally it worked. I believe that it is no accident that the dual exchange rate ended in 1970, only after there was a general feeling within the government that the reliability of the customs service had improved significantly.

A second point worth stressing is the role of access to credit as an important variable in the foreign exchange system. It takes a long time for imports to reach Indonesia. Long distances, irregular shipping schedules, and harbor delays can mean elapsed times from shipment to receipt by the
importer of two weeks from Singapore, three weeks from Hong Kong, a month or
two from Japan, and three or four months from the U.S. or Western Europe.
Somebody has to finance the goods during this period. As part of its general
import policy, the Indonesian government prohibited suppliers' credits on BE
imports, forcing importers of BE goods to pay for the goods at the time that
they opened their letter of credit. Also, many importers of DP goods did not
have sufficiently good trade connections abroad to obtain suppliers' credits.
With the long delays involved, access to Indonesian credit was important.
Though interest rates were substantial in absolute terms and usually positive
in real terms after October 1966, demand for credit generally exceeded the
supply, and informal rationing was necessary. Since much of the financing for
trade credit was being provided by the state banks through Bank Indonesia dis-
counting, the relative availability of trade credit and thus to some extent
the demand for imports could be controlled by the Bank Indonesia. This pro-
vided the Bank Indonesia with a great deal of leverage, but it also means that
access to credit had some of the characteristics with respect to imports of a
licensing system. The "licenses," though, were being allocated by the state
banks. Between 1965 and late 1968 these banks had been consolidated in one
single institution; after 1968 they were hived off and given a semi-autonomous
status.

But the "licensing" system was not really a closed one. There were
smaller private banks, which lent funds at 1-2% per month above the rates of
the state banks, and there was always Singapore. And, as inflation slowed and
inventories of imported goods were again built up, demand for trade credit
slackened so that rationing was no longer necessary. By 1970, some branch
managers of state banks were complaining that they could not find enough de-
manders for their credit. Only for the very low interest loans -- e.g., the
1% a month medium term investment credits, which could be used to import capital equipment and were available after mid-1969 -- was there still significant excess demand. In sum, one could say that the foreign exchange system was not quite as open as it looked, but it was still a good deal more open than most other less developed countries' foreign sector.

There is one other interesting aspect to the ban on suppliers credit and the forced use of domestic credit to finance imports. The high domestic interest rates put a premium on fast delivery of goods. It thus worked as a discriminatory tariff, favoring close suppliers. (Or, one could view it as a multiplicative factor on freight rates.) It also favored the use of Singapore as an entrepot for Indonesia, beyond that which the traditional ties of family and finance between the two countries would have warranted. An Indonesian importer who faced 3% a month interest charges would have been willing to pay a Singapore trader up to 10-1/2% more for an American produced item that could be delivered from Singapore in two weeks but would take four months from the U.S. This kind of margin could cover the Singapore trader's warehousing and trans-shipping costs and still leave a margin of profit, since he faced an appreciably lower interest rate. But the higher price to the Singapore trader meant a foreign exchange loss for Indonesia. If the opportunity cost to Indonesia of borrowing foreign exchange was less than 3% per month, the country would have been better off if the domestic interest rate on loans for imports had been decreased to that opportunity cost rate.

3. **Tariffs and Effective Protection**

Not much has been said thus far about tariff structure and its effects on the domestic allocation of resources. This has not been accidental. Tariff policy has been largely a neglected area in Indonesia. Tariffs have been seen
primarily as serving a revenue function. There have been numerous changes in the duty schedule described in Section III, many of them in response to protectionist pleas. But the changes have been ad hoc, and I would argue that the government has not yet developed a consistent tariff strategy. Further, until recently a tariff strategy did not appear to matter very much. The manufacturing sector is small and until 1969 was not expanding very rapidly. Expansion of the manufacturing sector was not considered a priority area of the stabilization program. The main efforts of the government were aimed at achieving and maintaining price stability, expanding rice output, keeping the foreign exchange sector in reasonably healthy shape, and rehabilitating the existing industrial plant. A tariff policy would have to wait for quieter times. Finally, in any event, import smuggling would have placed limits on the effectiveness of any tariff policy.

But patterns of consumption, production and importing were affected by the tariff structure. Further, substantial amounts of foreign investment have been attracted -- at least at the intent stage -- and the incentives and disincentives of the tariff structure surely have influenced this flow. And, with the stabilization program largely completed and planning efforts turning toward growth and development targets, the tariff structure will become increasingly important.

As mentioned in Section III, the tariff structure is essentially cascaded in the familiar manner, with the lowest tariffs on capital goods, higher tariffs on raw materials, and highest tariffs on finished consumer goods. However, these distinctions are not always clearly defined, and the frequently conflicting considerations of maintaining revenues, discouraging luxury consumption, providing protection for nascent industries, and ensuring reasonable prices for consumers have pulled the tariffs on individual items in different
directions. Potential close substitutability among imported items in consumption or production have frequently been forgotten or ignored by policy makers, with unfortunate consequences.

A good area to bring out these considerations in the import of automobiles. Built up automobiles have a duty rate of 200% and a sales tax of 20%. Sedans costing over $2,000 (FOB) have a duty of 300% and a sales tax of 50%. If viewed as a luxury tax, the combined rates are not unreasonable. Given Indonesia's manufacturing capability and the size of the market, it is not likely to lead to the establishment of a domestic industry turning out automobiles from the basic raw materials. Built-up jeeps have a duty rate of only 100% and a sales tax of only 10%. Jeeps, of course, are basically an input/production processes, useful for navigating in rural areas where roads are poor. But there is a high substitutability in use between jeeps and sedan automobiles. The results are familiar to any resident of Djakarta: urban consumers, companies, and even government agencies (since they have to pay duties) chose to buy jeeps instead of sedans for urban transportation purposes, and the Djakarta traffic jams have been composed of jeeps rather than sedans. This meant a foreign exchange loss, since the foreign exchange costs of a jeep (e.g., from Japan) were usually 30-50% above the cost of a sedan that would serve the same urban functions. It also meant a tariff revenue loss, since few people bought the items with the higher duty rates.

This preference for jeeps over sedans has been mitigated in the last two years, because few built-up vehicles are being imported. The duties are only 30% (and 5% sales tax) on a completely knocked down jeep and 50% (and 10% sales tax) on a CKD sedan. The effective tariff protection has been more than enough to encourage the domestic assembly of these vehicles. The tariff differential between jeeps and sedans is no longer substantial enough to
over-shadow the foreign exchange cost differential. But the correction of this distortion has been achieved at the expense of a likely loss in tariff revenues, a loss of the luxury tax on automobiles, and the encouragement of an assembly industry which, if it follows the pattern of automobile assembly industries in other less developed countries, is likely to be highly inefficient.  

Bicycle imports present a similar picture. Built-up bicycles carry a duty of 50%; CKD bicycles have a duty of only 20%. Domestic assembly is strongly encouraged. But, to encourage domestic production of bicycle repair parts, the duties on repair parts are high. As a consequence, there are many "briefcase assemblers" who import CKD bicycles and sell the parts. (One wonders if somewhere in Indonesia there are huge piles of handlebars or other parts that are not demanded for replacement.)

The large tariff differential between the built up and CKD items mentioned in the above paragraphs is generally true throughout the consumer goods area and is true generally for the differentials between inputs and finished goods in consumer goods. Built up air conditioners and refrigerators enter at 70%, CKD at 35%; biscuits and cookies enter at 70%, while wheat flour enters at 0% and sugar at 8%; clothing enters at 105%, while cotton cloth enters at 60-70%, and raw cotton enters at 8%. By contrast the tariff differentials are not very large on semi-finished producers goods. Pig iron enters at 0%, but iron pipes enter at only 5-10%; asbestos enters at 0%, but asbestos products enter at 10%; aluminum enters at 5%, but aluminum wire and sheet enter at 10%.

A more rigorous statement of the true protection given to the various industries would entail a calculation of effective protection rates, in which the tariff on inputs would be weighted by their importance in the production process, so that the difference between the tariff on the output and the inputs
would reflect, in effect, by how much value added could be raised above that which would prevail in the absence of any tariffs.\footnote{24} This would require an up-to-date input-output table or industrial census. Unfortunately, neither exists. In the absence of this kind of data base, I would argue that the tariff structure described above, with any reasonable assumptions about the value-added involved in assembly and consumer goods industries, has offered a great deal of potential effective protection to these industries. The effective protection offered to semi-finished producers goods has been much more modest.

The effective protection yielded by the tariff structure has been modified by three countervailing influences. First, during the period before April 1970, the dual exchange rate influenced effective protection. Whether the net effect of the dual exchange rate was positive or negative, however, depends on which rate is used for the effective protection calculation. Tariffs were collected at a special customs exchange rate, which was usually at or near the BE exchange rate. Thus, the effective rate of protection under the dual rate was

\[
\text{ERP}_i = \frac{\frac{R_i}{R_b} \cdot T_i \cdot \frac{R_t}{R_b} - \sum_{j} a_{ji} \cdot \frac{R_i}{R_b} \cdot T_j \cdot \frac{R_t}{R_b}}{1 - \sum_{j} a_{ji}}
\]

where \(i\) refers to an output

\(j\) refers to an input

\(R_i\) is the exchange rate applicable to the output

\(R_j\) is the exchange rate applicable to the input

\(R_b\) is the exchange rate used as the base for the ERP calculation

\(R_t\) is the exchange rate used for tariff assessment

\(T\) is the nominal tariff

\(a_{ji}\) is the value of input \(j\) into output \(i\).
If the BE rate is used as a base, then the dual exchange rate raised the total effective protection from the indicated by the nominal tariff schedule except in cases in which both inputs and outputs entered at the BE rate. If the DP rate is used as a base, then the dual exchange rate lowered effective protection except for the case in which a producer could get his inputs at the BE rate but sold his output in competition with DP imports; in this case the "subsidy" on BE imports might more than offset the lower tariff assessment rate, so effective protection might change in either direction. The size of the change in effective protection depended, of course, on the size of the DP/BE differential. This tended to be in the 15-20% range, though it got as high as 47% in October 1968. From May 1969 until April 1970 it was 16%. Offsetting this differential, to a small extent, was the ability of importers of DP goods to get suppliers' credits abroad, whereas the BE importer had to use domestic credit. On a two or three week shipment from Hong Kong or Singapore (from where most of the suppliers credits came) the cost saving was 1-2%.

Second, the foreign and domestic investment programs provide for the exemption from income taxes and from duties for some imports for new investors under the programs. The exemptions extend for 2-5 years and apply to duties on capital goods in all cases and apply in some instances to duties on all imports. The latter provision is at the discretion of the Government Investment Boards. Together, these provisions can mean a significant increase in effective protection for the new investor.

Finally, the prevalence of import smuggling undercuts the tariff structure and reduces the effective protection available to producers. As one businessman in an interview put it, "There is not a single category of dutiable goods which is not smuggled." If smuggling reduced output and input prices below their full tariff mark-ups by the same percentage, effective protection
would be reduced by the that percentage. But the incentives for smuggling high duty, finished items are much greater. A pricing survey conducted by Richard N. Cooper and myself revealed a downward tendency between the ratio \( Y \) of the actual selling price of an item to its legally landed (tariff and sales tax inclusive) price and the combined tariff and sales tax \( (T) \) on the item. The relationship we found for a sample of 72 items was

\[
(12) \quad Y = 1.15 - 0.16T \quad \quad R^2 = 0.20 \\
(16.15) \quad (4.17)
\]

(The figures in parentheses are the t-ratios). If there were no smuggling, we would expect to find the constant term somewhere above 1.00 (to allow for shipping costs, dock costs, and local distribution costs) and a non-significant coefficient on \( T \). The negative coefficient on \( T \) is significant and does indicate that the higher tariff items are getting less protection than the schedule specified.

This last point is seen more clearly through some manipulation of the above equation. Since

\[
(13) \quad Y = \frac{A}{F} (1 + T)
\]

where \( A \) is the actual local price and \( F \) is the foreign price, we can combine (12) and (13) to get

\[
(14) \quad \frac{A}{F(1 + T)} = 1.15 - 0.16T
\]

or

\[
(15) \quad \frac{A}{F} = 1.15 + 0.99T - 0.16T^2
\]

The received protection to a potential or actual local producer, as far as the tariff on his output is concerned, is \( A/F - 1.00 \). If we take 15% to be the
expected mark-up on duty-free items, we find that the received protection on a 20% duty item would be 19%, but the received protection on a 100% duty item is only 83%, and the received protection on a 200% duty item is only 134%. If a manufacturer produced an item that had a 100% nominal duty, inputs that have a 20% nominal duty, and 50% value added involved in the process under free trade, the tariff schedule would appear to promise him an effective protection rate of 180% but smuggling would reduce it to 110%.

One of the justifications offered for the list of banned imports (Table 10) is that in the face of smuggling, banning is the only way of assuring protection for domestic producers. The same argument could be used to support banning as a way of discouraging luxury consumption. If Mercedes cars are banned, the appearance of a new model Mercedes on a street creates a presumption of illegal entry that even a 1000% tariff does not. But someone must be willing to apprehend and prosecute the possessors of the contraband. In Djakarta, months after the ban on imported canned milk and dry cell batteries had been in effect, imported brands were still on sale in retail shops. It is most unlikely that these goods were coming from pre-ban inventories, given the high interest rates prevailing in the economy. Also, there is no way of distinguishing on the street whether a motorcycle was locally assembled or entered illegally fully built-up. Intermediate products like galvanized sheets or semi-knocked down radios do not remain in that form for very long and are thus not readily identifiable as contraband. Accordingly, responsibility for enforcing the ban falls back on the customs service, whose weakness was the cause of the ban in the first place. It is not clear that banning has achieved its protectionist effect. And if it has, the precedents that it has created may prove unfortunate for the future.

It is impossible to tell whether the sum of the dual exchange rate,
investment program, and smuggling effects have augmented or diminished the effective/protection indicated by the nominal tariff schedule. Nevertheless, the perceived effective protection seems to have been high enough to have attracted resources into the consumer goods and assembly areas. It is my strong impression that the amount of "finishing touches" assembly of consumer goods has increased substantially over the past 2-3 years. Further, as seen in Table 12, of the $459 million in foreign investment projects that have been approved by the government from 1967 through September 1971, over 60% have been in the areas of food, textiles and leather, and metal products (largely assembly). The bulk of the remainder have been for rubber products (for which Indonesia has its own supplies) and cement (in which high transport costs relative to value create a significant extra tariff). Less than 3% by value is intended for basic metals. Table 13 indicates that an even higher percentage of approved domestic investment is intended for food, textiles, and other finished consumer goods, with only 10% intended for chemicals, basic metals, and machinery.

4. Allocative Effects

The previous section described the incentives and disincentives of the foreign sector and the directions in which resources have tended to flow. Are these resources being channeled into efficient or inefficient uses? Once a system of tariffs and taxes are set up, the potential for allocative distortions and inefficiency becomes large. Though theoretical cases for optimal tariffs and taxes to rectify other distortions can and have been made, rarely do the actual taxes and duties bear much resemblance to their theoretical namesakes. Thus, an investigation of the efficiency effects of the incentive structure is certainly warranted.

One way to analyze the efficiency of different activities in the economy is through the "domestic resource cost" methodology suggested by
Table 12: Approved Foreign Investment Projects
in Manufacturing, 1967-September 1971 (millions of dollars)

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>32</td>
<td>$ 52.4</td>
</tr>
<tr>
<td>Textile and leather</td>
<td>31</td>
<td>158.3</td>
</tr>
<tr>
<td>Metal products</td>
<td>64</td>
<td>74.7</td>
</tr>
<tr>
<td>Wood and wood products</td>
<td>3</td>
<td>1.2</td>
</tr>
<tr>
<td>Paper and paper products</td>
<td>11</td>
<td>10.2</td>
</tr>
<tr>
<td>Chemicals and rubber</td>
<td>77</td>
<td>82.5</td>
</tr>
<tr>
<td>Non-metallic minerals</td>
<td>10</td>
<td>62.7</td>
</tr>
<tr>
<td>Basic metals</td>
<td>7</td>
<td>11.7</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>5.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>242</td>
<td>459.1</td>
</tr>
</tbody>
</table>

Table 13: Approved Domestic Investment Projects
in Manufacturing, 1968-December 1970 (billions of Rupiahs)

<table>
<thead>
<tr>
<th>Category</th>
<th>Rp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>13.1</td>
</tr>
<tr>
<td>Beverages</td>
<td>0.3</td>
</tr>
<tr>
<td>Tobacco</td>
<td>2.6</td>
</tr>
<tr>
<td>Spinning</td>
<td>0.9</td>
</tr>
<tr>
<td>Weaving, knitting, finishing, dyeing</td>
<td>36.7</td>
</tr>
<tr>
<td>Other textiles</td>
<td>0.6</td>
</tr>
<tr>
<td>Paper and paper products</td>
<td>1.4</td>
</tr>
<tr>
<td>Printing and publishing</td>
<td>2.9</td>
</tr>
<tr>
<td>Leather products</td>
<td>0.4</td>
</tr>
<tr>
<td>Rubber products</td>
<td>0.2</td>
</tr>
<tr>
<td>Plastics</td>
<td>2.4</td>
</tr>
<tr>
<td>Pharmaceuticals and cosmetics</td>
<td>3.2</td>
</tr>
<tr>
<td>Electrical appliances</td>
<td>2.2</td>
</tr>
<tr>
<td>Assembling transportation equipment</td>
<td>4.1</td>
</tr>
<tr>
<td>Basic metal products</td>
<td>6.9</td>
</tr>
<tr>
<td>Machinery</td>
<td>0.3</td>
</tr>
<tr>
<td>Chemicals</td>
<td>1.5</td>
</tr>
<tr>
<td>Non-metalic mineral products</td>
<td>3.6</td>
</tr>
<tr>
<td>Others</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>84.7</strong></td>
</tr>
</tbody>
</table>

Source: Boucherie (1971)
Kreuger (1966) and Bruno (1963, 1967). This involves measuring the total domestic costs, direct and indirect, of earning a net unit of foreign exchange through exporting or saving a net unit of foreign exchange through import substitution, after the foreign exchange input costs of the activity have been netted out. If opportunity costs are used to measure the domestic costs, then the calculation becomes one of finding the domestic opportunity costs of earning or saving a unit of foreign exchange. This calculation is akin to that of a cost-benefit analysis. Activities or projects can be ranked according to their DRC ratios, and these ratios can be compared to the equilibrium or shadow exchange rate for a measure of absolute efficiency. A major drawback to the method is that it requires analysis of a "typical" operating year for an activity, and thus it loses some information on the time pattern of investment and the starting up costs of production that a full present-value cost-benefit analysis would include. Still, it does offer an easy and intuitively appealing method of ascertaining efficiency, and frequently the time pattern information that would justify a more laborous present-value calculation is simply not available for prospective projects.

The connection between a DRC calculation and effective protection can be shown as follows: Effective protection for an activity can be represented as

$$\text{ERP}_i = \frac{V_{i,d}}{V_{i,w}} - \frac{V_{i,w}}{V_{i,w}} = \frac{V_{i,d}}{V_{i,w}} - 1$$

where $V_{i,d}$ is domestic value added under protection.

$V_{i,w}$ is value added under free trade or at world prices.

Suppose that an export or import substitution activity uses only imported inputs and domestic labor and capital. The difference between the export or
import price of the finished output and the import prices of the inputs represents the net foreign exchange earned or saved. But it also represents, if we assume fixed coefficients, value added at free trade or world prices. The payments received by the domestic capital and labor (not yet valued at opportunity cost) would be the domestic value added under protection. Thus we could state

\[(15) \quad \text{DRC}_i = \frac{V_{i,d}}{V_{i,w}}.\]

The only important difference between equations (14) and (15) is that in equation (14) both numerator and denominator are expressed in terms of local currency, whereas in equation (15) the numerator is in local currency but the denominator is in foreign currency. Any ranking of activities would be identical for either technique.

If the activity uses domestic inputs which are actually or potentially tradable, however, the DRC and ERP rankings will differ. We can think of replacing an imported input with a domestically produced tradable input as adding some foreign exchange saving to the denominator of (15) and adding some domestic costs to the numerator. Only if the DRC of the tradable input is identical to that of the activity under consideration would the latter's DRC remain unchanged. Otherwise, it will reflect a weighted average of equation (15) and the DRC's of the domestically produced inputs, with the weights being the percentage contribution to total value.\(^{28}\) Thus, the DRC and ERP rankings will no longer necessarily be identical.

Further, the treatment of non-tradable inputs (e.g., public utilities, local transportation) will introduce differences in the rankings. For ERP calculations, non-tradables can be treated as part of domestic value-added or they / can be treated as inputs with a zero tariff.\(^{29}\) For DRC calculations,
the non-tradables should be broken into their domestic opportunity cost and foreign exchange cost and those costs allocated to the numerator and denominator appropriately. The effects of these procedures on the rankings will be different.

Finally, to measure efficiency, we should measure domestic costs at opportunity costs. This will introduce substantial differences between DRC and ERP rankings. An ERP measurement in effect tells us how much potential value added is available in an activity. This value added could be absorbed either by inefficient producers using large amounts of domestic resources which are paid only their opportunity costs or by efficient producers using smaller amounts of domestic resources and earning monopoly rents from the remainder. The latter case is one in which we would find that an activity had a comparatively high ERP and yet had a low DRC.

When we actually come to measuring the DRC's of various activities, we are usually obliged to measure them on an average basis over the whole activity. Ideally, we would like to measure them on a marginal basis, so as to separate the efficient from the inefficient ranges of production. But the handicaps involved in measuring on an average basis are not too great. If coefficients are rigid and constant returns hold, average and marginal are identical. Even if the activities display substantial economies or diseconomies of scale, we are all right as long as we know on which side of the cost curve we are. A very high DRC implies a substantial expansion or contraction of the activity; a low DRC implies that the activity is doing reasonably well.

As was true for effective protection, a thorough analysis of DRC's in the Indonesian economy would require an up-to-date industrial census. This does not exist. Further, the hyper-inflation of the mid-1960's shrunk book values of capital equipment to virtually zero. It would be next to impossible
to obtain a true measure of the capital involved in any establishment started before 1965. Finally, if we are interested in the allocative effects of the post-1965 sets of incentives, the pre-1965 industrial enterprises are largely irrelevant. We are interested in the new enterprises since then.

New foreign investment has been attracted by the overall incentives of the foreign exchange system. The Foreign Investment Board required operating information from applicants. The Board was kind enough to make available to me a sample of the foreign investor applications. Though many of the applications did not have sufficient information to permit DRC calculations, fifteen applications in a wide range of activities did have enough information, and I have used this sample for the analyses below.

The strengths and weaknesses of this sample should be stressed from the outset. First, a sample of fifteen is obviously very thin. I believe that these are good examples and that they can be instructive, but clearly only more information could confirm this belief. Second, these may be serious biases in the data. Foreign investors may be overly optimistic. They are trying to convince the Foreign Investment Board that they have worthwhile projects. On the other hand, they may not want to appear to be making unseemly profits, particularly since they are foreigners. Thus, the biases may work to offset each other. Also, industrial censuses are not free of biases either. Respondents may be unduly secretive or pessimistic, particularly if they are suspicious that the tax authorities may gain access to the census information. Finally, the major strength of the sample does lie in its inclusion of activities that have been proposed in response to the incentives of the foreign exchange system.

I adjusted the figures presented by the foreign investors in a few ways. First, in cases in which depreciation seemed excessively high or low,
I adjusted accordingly. Second, utilities costs were assumed to be four-fifths foreign exchange costs and one-fifth local costs, since the major component was diesel oil to drive generators, and this oil could otherwise have been exported; repairs and miscellaneous expenses were split equally between local and foreign exchange costs. Third, to standardize the projects and eliminate questions of whether and how profits would be repatriated, I pretended that the capital had come from domestic sources, but capital equipment, management services, and royalty fees still meant a foreign exchange drain on the project. The added complication of profit repatriation will be mentioned later. Fourth, for the opportunity cost of capital I used 25% per year. Fifth, for local wages I tried both the figures listed in the applications and 50% of those figures. The latter was based on the assumption that the real opportunity cost for unskilled labor might be considerably below going wages, but since local skilled, administrative, and managerial labor were also included in the local wages figure, I did not want to use a zero labor cost.

The resulting DRC calculations are shown in Table 14, along with the rankings of the activities. The first noticeable feature of the table is that it makes very little difference in the rankings whether labor opportunity costs are measured at stated wages or only 50% of stated wages. As seen in Table 15 the rank correlation between columns (1) and (2) is 0.98. Second, the activities are fairly evenly split between efficient and inefficient enterprises. Since these proposals were made between 1968 and 1970, an exchange rate somewhere between Rp 300 = $1 and Rp 378 = $1 should be the standard for judgement. If we use the latter exchange rate, the first seven activities qualify as efficient under the criterion of column (1) and the first nine qualify in column (2). In both, there is a sizable jump between the ninth and tenth ranked projects. Consumers goods activities and producers goods activities appear on
Table 14: Direct Resource Costs and Other Measures, Sample of 15 Foreign Investment Projects

<table>
<thead>
<tr>
<th>Item</th>
<th>DRC Value</th>
<th>Rank</th>
<th>Labor Private profit at 50%</th>
<th>Total Capital per employee</th>
<th>Fixed Capital per employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biscuits</td>
<td>Rp161/$</td>
<td>1</td>
<td>32%</td>
<td>8.5 $1,685</td>
<td>2 $1,517</td>
</tr>
<tr>
<td>Ink</td>
<td>187</td>
<td>2</td>
<td>158</td>
<td>1 2,000</td>
<td>3 1,264</td>
</tr>
<tr>
<td>Textile garments for export</td>
<td>273</td>
<td>3</td>
<td>90</td>
<td>2 351</td>
<td>1 240</td>
</tr>
<tr>
<td>Extruded Aluminum</td>
<td>288</td>
<td>4</td>
<td>13</td>
<td>14 25,471</td>
<td>15 24,245</td>
</tr>
<tr>
<td>Louvre Windows</td>
<td>351</td>
<td>5</td>
<td>62</td>
<td>3 5,000</td>
<td>7 3,650</td>
</tr>
<tr>
<td>Assemble watches, pens</td>
<td>353</td>
<td>6</td>
<td>64</td>
<td>4 11,811</td>
<td>12 960</td>
</tr>
<tr>
<td>Dental equipment</td>
<td>357</td>
<td>7</td>
<td>17</td>
<td>10 13,085</td>
<td>13 8,609</td>
</tr>
<tr>
<td>Charcoal for export</td>
<td>411</td>
<td>8</td>
<td>16</td>
<td>16 5,587</td>
<td>9 4,350</td>
</tr>
<tr>
<td>Glue</td>
<td>415</td>
<td>9</td>
<td>15</td>
<td>12.5 7,547</td>
<td>10 5,755</td>
</tr>
<tr>
<td>Asbestos sheets</td>
<td>700</td>
<td>10</td>
<td>10</td>
<td>15 8,760</td>
<td>11 5,109</td>
</tr>
<tr>
<td>Steel pipe</td>
<td>986</td>
<td>11</td>
<td>15</td>
<td>12.5 23,900</td>
<td>14 13,069</td>
</tr>
</tbody>
</table>
| Polyester textile fabrics for domestic consumption 1,160 12 1,092 13 32 8.5 4,960 6 4,131 9
| Pharmaceuticals               | 1,243     | 13   | 1,034                       | 12 5,555                    | 8 3,425                   | 7                          |
| Refrigerator and stove assembly 1,374 14 1,237 14 61 5 2,360 5 1,797 6
| Carpets                       | 5,609     | 15   | 5,012                       | 15 2,232                    | 4 1,224                   | 3                          |

Source: Foreign Investment Board figures; see text for derivations.
Table 15: Rank Correlation Coefficients (from Table 14)

<table>
<thead>
<tr>
<th></th>
<th>DRC</th>
<th>DRC with labor at 50%</th>
<th>Private Profitability</th>
<th>Total capital per employee</th>
<th>Fixed Capital per employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRC</td>
<td>-</td>
<td>0.98</td>
<td>0.17</td>
<td>0.09</td>
<td>0.08</td>
</tr>
<tr>
<td>DRC with labor at 50%</td>
<td>-</td>
<td>-</td>
<td>0.20</td>
<td>0.05</td>
<td>0.14</td>
</tr>
<tr>
<td>Private profitability</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.70</td>
<td>0.83</td>
</tr>
<tr>
<td>Total capital per employee</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.76</td>
</tr>
<tr>
<td>Fixed capital per employee</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Table 14.
both sides of the efficiency line. There is no clearly discernible pattern that emerges from the sample.

Column (3), the foreign investors' stated return on capital, was included to see if this showed a high correlation with the social returns implied by the DRC's. As seen in Table 15, the rank correlation coefficients are only 0.17 and 0.20.

Finally, the total capital per employee figures were included to indicate the nature of the technology that is being attracted. The absence of duties on capital goods has attracted a relatively capital-intensive technology. The median activity in the sample requires $5,555 per man. But the bulk of intended investment has been aimed at the more labor-intensive areas. If we apply the total capital per man coefficients from over sample to the investment categories of Table 12 and 13, we find that all of the manufacturing investment, if effected, would have a weighted average of $3,300 capital per man and would create approximately 200,000 jobs. This is a sizeable number, but it represents only one-fifth of the estimated 1970 employment in large-scale (over 20 employees) manufacturing and perhaps only 8% of all manufacturing employment. These investment rates at these capital-labor ratios, even with concentration at the labor-intensive end of the spectrum, will not make a sizable dent in Indonesia's unemployment problems. Also, the rank correlation between total capital intensity and DRC efficiency is only 0.09 and 0.08. Given the current set of incentives, one cannot count on the efficient firms being the most labor-intensive.

This capital intensity can be compared to that prevailing in Japan in 1955. Table 16 gives the figures for fixed capital per man for Japan. The prices in that table are now 20 years out of date, but even if we double all figures, only three industries (petroleum products, iron and steel, and non-
ferrous metals) would have fixed capital per man figures above $3,000. The relevant Indonesian figures are also fixed capital per man, not total capital per man. These figures are provided in the last two columns of Table 14. The median activity requires $3,650 in fixed capital per man. For comparable activities, the Indonesian activities are considerably more capital intensive than their Japanese counterparts (even with a doubling the Japanese figures), with the exception of the textile garments for export. The Indonesian manufacturing does seem to be relatively capital intensive.

A special word should be said about these figures and their relation to foreign investment. As noted above, an activity may be highly protected but still operate efficiently at a low DRC. This would imply economic rents for the owners of the activity. If the owners are foreign and choose to repatriate their profits including rents, the total foreign exchange costs of the activity including the repatriation may exceed the foreign exchange costs of importing the finished item itself; i.e., the foreign exchange saving would be negative. In this sense, the figures in Table 14 may be too sanguine. Even some of the apparently efficient activities may result in foreign exchange losses if excessive protection is given and profits and rents are repatriated.

5. Export incentives and export response

In comparison with the positive and substantial effective rates of protection available for import substitution activities, exports have been operating with negative effective protection. Exports have been subject to explicit export taxes. They have also been implicitly taxed through the operation of the dual exchange rate and through the over-valuation of the exchange rate caused by import duties. Further, except for investments undertaken through the Foreign and Domestic Investment Programs, exporters have had to pay duties on their imported inputs.
Table 16: Japanese Fixed Capital Per Worker, 1955
(in 1951 prices)

| Products from coal                  | $1,338 |
| Products from petroleum             | 9,608  |
| Foodstuff                           | 530    |
| Iron and steel                      | 2,558  |
| Iron and steel products             | 208    |
| Non-ferrous metals                  | 1,516  |
| Machines                            | 477    |
| Vehicles and ship-building           | 705    |
| Paper goods                         | 508    |
| Wooden goods                        | 372    |
| Hide goods                          | 422    |
| Rubber goods                        | 269    |
| Spinning                            | 1,336  |
| Textile products                    | 475    |
| Base chemicals                      | 1,413  |
| Chemical products                   | 1,100  |
| Ceramics                            | 544    |

Source: Okita (1965), Table 2, p. 384.
improvement in the relative taxation of exports between these dates (Table 7) 
was mirrored by a just under 50% improvement in the real rupiah receipts of 
exporters.

The returns to exporters have not been uniform, however. Before 
April 1970 the opportunities for discrimination among exports were large. 
Explicit export taxes were 10% on some commodities and 25% (later 15%) on others.
Further, the dual exchange rate, check-prices, and the levying of the export tax 
on the check-price rather than the actual export price offered room for greater 
discrimination. In theory the check-price could range between 0% and 100% of 
the FOB export price. The former meant that the exporter paid no export tax and 
converted all of his foreign exchange at the DP rate; the latter meant a 10, 
15, or 25% tax on the full FOB value, with the remainder of the exporter's 
foreign exchange converted at the less favorable BE rate. With the 25% export 
tax and a 16% exchange rate margin, the potential differential returns were 
substantial.

The differential returns to exports in the A and B categories were 
indicated in Table 7 and 17 above. These differential returns had two justi-
fications. The A list exports were the traditional exports which had well-
established markets. The B list items were considered newer and more/need of 
explicit or implicit incentives to help them break into new markets. Also, the 
lower check-prices for B list exports were as much a matter of necessity as 
desire by the Ministry of Trade. World export prices were less readily avail-
able for most B list items than for A list items. The Ministry's information 
gathering facilities were not sufficiently developed to allow it to set check-
prices for B list exports. Consequently, the check prices were set by ex-
porter associations. After mid-1967, these associations tended to set their 
check prices at roughly 50% of FOB value. This seems to have been a rough
compromise between the associations' desires to have a zero check-price and the
Ministry's desire to have high check-prices for export tax revenue purposes.

Within the A list there were differences in exporter returns among
commodities and over time. As noted in Section II, the Ministry's goals in-
cluded revenue from export taxes and ensuring adequate exporter returns so as
to discourage smuggling. Also, short-run supply elasticities were assumed to
be quite low, so that the "non-functional" returns from temporary high prices
could be taxed away without serious consequences. Depending on the time and
the crop, one of these goals would dominate. Unexpected changes in actual ex-
port prices after the check-prices for the month had been announced were an
additional element in the determination of actual exporter returns. Table 18
shows the quarterly returns to exporters on A list exports in 1968 and 1969.
Rubber and copra were consistently favored over the other commodities. There
were widespread fears that substantial amounts of copra and rubber were being
or would be smuggled if sufficient returns were not forthcoming. Also, the
Ministry was concerned about the deterioration of the stock of rubber and
coco nut trees and wanted to offer some encouragement for better upkeep and
replanting. By contrast, coffee was in surplus in Indonesia, and, as a member
of the International Coffee Agreement, Indonesia was limited as to coffee ex-
ports. There was no need to encourage more coffee production. Palm oil, palm
kernels, and pepper all had favorable prices and good markets. They did not
seem to need extra incentives.

Since the April 1970 consolidation of the exchange rate, there has
not been very much discrimination among exports as to effective returns. Oil
exports have their own regime, and the tiny category of manufactured exports
are exempt from the 10% export tax, but the remainder are all subject to the
10% export tax. The tax is applied to "guideline" prices set by the Ministry
Table 18: Effective Exchange Rates, Major Export Commodities, 1968-1969 (Rupiahs per dollar)

<table>
<thead>
<tr>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber</td>
<td>206</td>
<td>234</td>
<td>271</td>
<td>325</td>
<td>314</td>
<td>314</td>
<td>317</td>
<td>301</td>
</tr>
<tr>
<td>Copra</td>
<td>213</td>
<td>236</td>
<td>255</td>
<td>307</td>
<td>308</td>
<td>304</td>
<td>311</td>
<td>316</td>
</tr>
<tr>
<td>Coffee</td>
<td>206</td>
<td>224</td>
<td>242</td>
<td>283</td>
<td>278</td>
<td>277</td>
<td>285</td>
<td>293</td>
</tr>
<tr>
<td>Palm Oil</td>
<td>212</td>
<td>228</td>
<td>242</td>
<td>285</td>
<td>283</td>
<td>281</td>
<td>289</td>
<td>289</td>
</tr>
<tr>
<td>Palm kernels</td>
<td>210</td>
<td>226</td>
<td>242</td>
<td>277</td>
<td>291</td>
<td>282</td>
<td>280</td>
<td>282</td>
</tr>
<tr>
<td>Pepper</td>
<td>211</td>
<td>240</td>
<td>244</td>
<td>284</td>
<td>277</td>
<td>279</td>
<td>297</td>
<td>280</td>
</tr>
</tbody>
</table>

Source: Simhin (1970); Ministry of Trade figures.
of Trade, but in most cases these guideline prices have been set very close to actual export prices. Only in a few instances has the Department deliberately manipulated these prices: In 1970, the guideline prices of timber were set low, so as to give an extra incentive to timber extraction. And guideline prices that are slightly above actual prices have been set for very low grades of rubber, so as to discourage low grade rubber exports. But the effects have not been very great. Also, new investors can qualify for exemptions on imports and may qualify for the 1% medium term credits. But these are open to investors in virtually all export areas, so discrimination among exports does not enter here.

Just as for import tariffs, though, the nominal export tax does not tell the whole story. We should be looking at the value added in export activities and analyzing by how much value added is depressed by the export tax. If different export activities had substantially different percentages of domestic value added, the uniform 10% export tax could be yielding large differences in effective taxation and could have strong allocative effects. This would be particularly important for manufactured exports. But this is less important for Indonesia's current exports, which are entirely minerals and agricultural raw materials. Domestic value added bulks very large in all of these activities, so the 10% export tax is very close to a uniform 10% tax on value added. Even in cases in which processing of exports is possible - e.g., crumb rubber, coconut oil from copra, refining of mineral ores -- the primary input is the basic raw material which also carries a 10% export tax. Accordingly, the effective tax or the value added in the processing is still 10%.

The response of exports to the improvement in returns over time and to the differential returns to different commodities is difficult to measure. As was seen in Table II, the dollar value of exports has grown steadily since 1965. But it is difficult to determine how much of this is true growth and
how much is simply a return of exports to official channels from smuggling. When we look at individual commodities, the same question of real growth as against smuggling diversion arises. Some apparent growth in volumes may simply be better reporting by the statistical agencies. Further, the full supply response for tree and bush crops like rubber, coconuts (copra), palm oil and kernels, coffee, and pepper surely takes longer than the five years under study. Some short run response to improved returns is possible from more intensive picking and tapping and from inventory changes, but the full response from new plantings takes longer. Years of neglect under Sukarno cannot be undone quickly. Finally, exporters respond not only to rupiah receipts per dollar but also to international selling prices. Very favorable international prices can offset poor rupiah returns (this is usually the justification offered for heavy taxation of exports) and conversely.

The recorded volumes of Indonesia's major exports (excluding petroleum) over the past decade are offered in Table 19. Rubber and copra exports do seem to have improved during the past three years compared to the previous eight. This may be true growth; it may be a diversion from smuggling; it is probably an amalgam of the two. But even if it only represents a diversion from smuggling, the recorded increase does indicate that exporters are at least sensitive enough to official rupiah returns to change their channels of export. The trends in the other commodities are less observable. The year 1970 does seem to have been a good year for palm oil, palm kernels, tin, and tobacco, but it is too early to tell if these performances are going to be typical. Coffee exports are limited by the International Coffee Agreement. And pepper exports have been hampered by a serious pepper vine disease.

Perhaps the best indicator of the response to improved returns to exports has been the growth of timber exports. In 1966, timber exports were
Table 19: Exports of Major Commodities, 1960-1970

(Volume, in thousands of metric tons)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubber</td>
<td>556</td>
<td>657</td>
<td>777</td>
<td>581</td>
<td>627</td>
<td>708</td>
<td>680</td>
<td>652</td>
<td>771</td>
<td>755</td>
<td>825</td>
</tr>
<tr>
<td>Copra</td>
<td>168</td>
<td>247</td>
<td>110</td>
<td>108</td>
<td>150</td>
<td>124</td>
<td>119</td>
<td>114</td>
<td>217</td>
<td>157</td>
<td>188</td>
</tr>
<tr>
<td>Coffee</td>
<td>41</td>
<td>66</td>
<td>57</td>
<td>71</td>
<td>59</td>
<td>108</td>
<td>98</td>
<td>133</td>
<td>85</td>
<td>104</td>
<td>108</td>
</tr>
<tr>
<td>Palm Oil</td>
<td>106</td>
<td>117</td>
<td>100</td>
<td>110</td>
<td>133</td>
<td>126</td>
<td>177</td>
<td>133</td>
<td>152</td>
<td>120</td>
<td>173</td>
</tr>
</tbody>
</table>

Palm kernels: n.a. 33 31 31 33 33 32 39 37 28 44

Pepper: 12 18 11 23 22 12 21 37 25 13 2

Tin: 35 24 28 21 0.5 19 12 21 32 27 35

Tobacco: 3 3 11 10 2 14 13 10 9 6 17

under $10 million. In 1970, they were roughly $125 million, and in the first quarter of 1971 they were over $40 million. It is difficult to believe that increases of this magnitude could have occurred in the absence of the general freeing up of the foreign exchange system that has simultaneously occurred.

Still, the negative protection given to exports has had its allocative effects. It has effectively ruled out substantial exports of Indonesian manufactures. The incentives are simply not there. Only one firm has successfully navigated the oceans of bureaucratic red tape and has established a duty-free zone for itself, importing transistor components from Hong Kong, assembling them, and exporting the finished transistors back to Hong Kong. A handful of batiks and handicrafts are the only other manufactured products that leave Indonesia. The government has established a bonded warehouse, which it eventually hopes to expand into a duty-free manufacturing zone, but progress has been slow.

The negative protection has also surely discouraged investments at the margin in export activities, though this has been partially mitigated by the foreign and domestic investment programs, which allow import duty exemptions (but not an export tax exemption) for exporting activities as well as import substitution activities. But the actual and potential comparative advantage of Indonesia in mineral, timber, and some agricultural exports has been so great that substantial amounts of new investments have been made or are intended for these areas. Another way of expressing this is that the opportunity costs in the absence of exports on the natural resources in these areas are so low that even in the face of tax disincentives these activities are quite profitable and have warranted substantial new investment. Of the $1,605 million in foreign investment (excluding oil related investment) approved by the Foreign Investment Board through September 1971, $1,032 million was extended for agriculture,
4. Pricing and Moving Tied Foreign Aid

Tied foreign aid has presented a unique problem for Indonesia's open exchange rate system. Tied aid is worth less to the user than an equal amount of cash foreign currency, since the tied aid usually has to be used to buy goods that are over-priced in world markets. For most LDC exchange rate regimes this does not present a problem. Since their exchange rates are over-valued and subject to licensing, the licenses have a scarcity value that is higher than the nominal value of the foreign exchange. As long as the scarcity premium of the license is greater than the excess cost of the goods that are tied to the aid, aid foreign exchange can be sold without any extra effort. Importers would prefer to get a license for imports that are untied, but they can still make a profit from the license for tied imports.

But if foreign exchange does not have a scarcity premium above its face value, tied foreign aid cannot be sold alongside cash foreign exchange. Some means of pricing it lower than cash foreign exchange must be found. Further, the tied aid from different countries will have different equilibrium prices depending on the degree of excess cost over world prices that is involved in the tied goods.37/ A single exchange rate for all tied foreign aid will either fail to move some of the more over-priced aid goods or will offer a windfall gain to the buyers of the less over-priced aid goods and thus yield less counterpart revenues for the government.

The obvious solution is to auction the aid from each donor separately and let the market determine the price for each aid tranche. Unfortunately, the donors of the more over-priced aid are reluctant to see their aid sold at a rate that is "too cheap," and the IMF has frowned on anything that smacked of multiple exchange rates.
<table>
<thead>
<tr>
<th>Industry</th>
<th>Amount (millions of dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>74.7</td>
</tr>
<tr>
<td>Forestry</td>
<td>401.9</td>
</tr>
<tr>
<td>Fishing</td>
<td>13.6</td>
</tr>
<tr>
<td>Mining and Quarrying</td>
<td>541.5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>459.1</td>
</tr>
<tr>
<td>Construction</td>
<td>35.1</td>
</tr>
<tr>
<td>Trade and Hotels</td>
<td>51.4</td>
</tr>
<tr>
<td>Transport and Communication</td>
<td>12.0</td>
</tr>
<tr>
<td>Community, Social, and Personal Services</td>
<td>15.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,604.9</strong></td>
</tr>
</tbody>
</table>

Faced with this dilemma, Indonesia has tried a number of policies. From early 1967 through mid-1968, all aid was priced uniformly at a rate that was 10–20% below the BE exchange rate, with occasional help from favorable credit terms. Japanese aid funds moved very rapidly. American aid funds moved more slowly. In July 1968 the aid exchange rate was unified with the BE rate, and special credit terms were employed to give aid funds an advantage. Differential credit terms among countries allowed some adjustment for the different sources of aid. It is not clear why this arrangement was considered unsatisfactory, but when the exchange rate was consolidated in April 1970, Indonesia reverted to the former practice of a single explicit price for aid that was 14% below the cash foreign exchange rate. Again, Japanese aid moved very fast. In December, the aid rate was consolidated with the official exchange rate, and differential credit terms were again used. Finally, after the devaluation of August 1971 Indonesia won from the donors the agreement that explicit differential rupiah subsidies could be given to the buyers of different countries aid funds. Thus all buyers of aid funds will have to pay the official rate, Rp 415 = $1, for their funds, but the buyers of the more over-priced aid will get back a larger rupiah "refund" than will the buyers of the less over-priced aid funds. With a little practice, the Indonesian authorities ought to be able to duplicate roughly the results of an auction system.

7. Foreign Investment

Foreign investment poses a difficult political and economic problem for Indonesia. The welcoming of foreign investment has been one of the hallmarks of the economic policies of the new regime. The government has already approved over $1.6 billion in foreign investment in four years. This sum, if effected, will leave a significant mark on the Indonesian economy. In addition,
foreign oil companies have spent an estimated $350-400 million on oil exploration and field development.

Foreign investment brings capital and skills to the Indonesian economy. But it also brings foreign claims on the economy. It gives foreigners a significant "say" in the Indonesian economy. Foreigners may out-compete and drive to the wall Indonesian entrepreneurs; consumers may benefit but entrepreneurs suffer. As was discussed above, foreign investment can mean a net foreign exchange loss if the foreigners activities are given excessive protection. Mineral extraction and forestry by foreigners may pose special political problems for the future. Future generations of Indonesians may forget or discount the taxes paid and employment created by the foreigners and simply ask, who has "plundered" Indonesia's natural resources and why?

In its eagerness to establish a good name with foreign investors and partly from a lack of technical expertise in dealing with foreign investors, the Indonesian Government was probably too lenient in its tax concessions in the early contracts, particularly in the mining and forestry areas. Replanting provisions in forestry contracts have been absent or weakly enforced. More recent contracts have been noticeably tougher. But still, one can question the value of tax holidays and tariff duty exemptions. Most of the home countries of foreign investors have double taxation provisions, whereby income taxes paid in Indonesia are an offset against taxes in the home country. Thus, an income tax holiday for the foreign investor mostly benefits the home country treasury, not the foreign investor. Why, then, are the foreign investors eager to obtain a tax holiday? In some cases, the tax holiday does mean a net gain for the foreign investor. But, primarily, the tax holiday appears to be interpreted as an indication of good faith on the part of the host government. The government ought to be able to devise a less costly token of good
faith. The tariff duty exemptions lose revenue and have the expected allocative effect: they encourage capital-intensive production processes using imported capital equipment.

The tax concessions to foreigners have had further costs, since the provisions are applicable to approved domestic investors. The Foreign Investment Law, enacted in early 1967, raised the demand that equal treatment be given to domestic investors. Accordingly, in November 1968 the Domestic Investment Law came into force, with comparable provisions.

In some areas, the government has had second thoughts about foreign investment. Beginning in mid-1968, the Ministry of Industries began closing some manufacturing areas to foreign investors. By December 1970 this list had reached 41 industries. These industries are listed in Table 21. In practice, a few exceptions have been made, and if a foreign investor is persistent enough he may be able to win his case, particularly if he is willing to invest outside of Java. Nevertheless, the clear intent of the action is to protect the existing producers in these industries from future competition by new foreign entrants. To the extent that domestic entrepreneurs by themselves are not prepared to enter some of these industries, either because of capital or technological barriers, these industries are effectively protected from further competition.

Some features of Table 21 are worth noting. First, canned milk, dry cell batteries, galvanized sheets, and mosquito incense are also on the list of banned imports. With imports banned and foreign entry foreclosed, the present producers face actual and potential competition only from domestic entrants and smuggled imports. Further, in the areas of cigarettes, dairy products, detergents, shoe polish, and beverages, the primary beneficiaries of this barrier to new entry are earlier foreign investors. Foreign investors will
Table 21: Industries Closed to Foreign Investment, as of December 1970

Milk and other dairy products
Dry cell batteries
Monosodium glutamate
Cigarettes
Matches
Paint, varnish, lacquer
Plastic and leather shoes
Agricultural tools
Nails, screws, nuts, bolts
Laundry soaps
Detergent
Coconut oil
Nail-wire drawing
Flour mills
Tooth paste
Biscuits, bread, confectionery
Bicycle tires and tubes
Boot polish
Plastic ware
Printing
Bicycle assembly
Printing ink
Enamelware
Aluminium house-hold ware
Candy
Soft-drinks
Concrete and porcelain tiles
Bricks and tiles
Sewing machine assembly
Ice making
Can making
Tooth brushes
Mosquito incense
Watch assembly
Corrugated cardboard
Instant noodles
Zip fastener
Tanning
Hair wigs
Galvanized iron sheet
Fabric manufacturing except integrated spinning and weaving

Source: Ministry of Industries; Boucherie (1971).
also benefit from the entry barriers on dry cell batteries, sewing machine
assembly, leather shoes, porcelain tiles, and bicycle tires and tubes. In
these areas, the foreign investment barriers may yield the worst of all possible
worlds: highly protected markets, large profits for foreigners, and thus large
claims by foreigners on the Indonesian economy. Future entry, or at least the
potential for entry, would clearly be in the interests of everyone (except the
current producers). Also, the areas of wigs, leather tanning, and watch
assembly are actual and potential export industries. There seems to be little
gain to Indonesia to preventing foreign entry into these areas.

This entry foreclosure brings out the essential sensitivity problem
of foreign investment. Domestic entrepreneurs and even earlier foreign entre-
preneurs are unhappy about facing new competition. This has not yet become a
problem in mining and mineral exploration, because Indonesians clearly do not
yet have the large capital sums and technological skills that are necessary
(though Indonesia has developed a domestic capability in petroleum). Over 30%
of foreign investment has been intended for mining activities; only 1% of domestic
investment has been similarly intended. As Indonesian capabilities in mining
are developed in the future, the sensitivity to foreign investment in mining
will surely increase.

There is no easy way out of this dilemma. Outright foreclosure of
new foreign entry may generate greater costs than benefits. Rather, excessively
protected market positions should not be given to foreign investors, or to
domestic investors either, and the tax concessions to foreigners should be
withdrawn or shortened. This is especially true for mineral and forestry con-
cessions. If foreign investors still find it profitable to enter areas in which
domestic entrepreneurs have an "infant industry" argument for survival, the
presently available low interest rate medium-term investment credit program is
the suitable instrument for assistance.
Part V. A Strategy for the Future

With the stabilization program now a success, the attention of Indonesian policy-makers will be turning increasingly toward devising a long-run development policy. The second five year plan (1974-1979) will be based on that policy. While agriculture will remain the most important sector, more attention must and will be given to an industrialization strategy. The foreign trade sector will surely enter crucially into that strategy.

Indonesia must develop a coherent and enforceable tariff structure. That structure must be aimed at promoting labor-intensive manufactures for both domestic consumption and export. The pitfalls of an industrialization strategy based solely on import substitution, à la Pakistan, India, and Latin America, are now readily apparent: inefficient industries develop which refuse to disappear or become efficient; the small economic size of markets precludes efficient production in some areas; import licensing spawns a bureaucratic morass; efforts at exporting manufactures require extra subsidies which may turn out to be uneconomic; industrial expansion into intermediate and capital goods becomes difficult as the producers of final goods become used to access to foreign supplies at favorable implicit exchange rates; the industrial structure becomes excessively capital intensive; income distribution takes an unwelcome swing toward the new industrialists.\(^{36}\)

An industrialization strategy more keyed to exports should avoid most of these pitfalls. Also, Indonesia is relatively well located to take advantage of future efforts by Japan to farm out its labor-intensive manufactures. As wage rates rise in Korea, Taiwan, Hong Kong, and Singapore, the Indonesian economy could be in a good position to become a manufacturing supplier for Japan.

This kind of strategy would argue for a tariff structure with a few broad categories of relatively low rates. Excessive effective protection would not be given to domestic producers. Duties on capital goods would
be positive rather than zero, so as to give actual or potential domestic capital
goods producers some modest effective protection and to discourage capital-
intensive manufacturing generally. The low tariff structure would mean that
the exchange rate would continue to bear the brunt of adjusting Indonesia's foreign
trade sector to changes in the external and internal environment. Exports would
thus not be subject to very much implicit taxation from an overvalued exchange
rate. As the general taxation efforts by the Government improve, the Government
will have less need to rely on trade taxes. It is even quite possible that
this tariff structure would increase revenues, since the low rates would encourage
the return of smuggling flows to legal channels and the imposition of duties on
capital goods, other exempt items, and on new investors would generate
increased revenues. A general excise tax at a high rate (perhaps 100%) would
be retained for luxuries.

This kind of strategy would continue to encourage Indonesia's trad-
tional raw material exports, while stimulating new manufactured exports. But
even with moderate duties on inputs, manufacturers aiming at export markets would
still be at a disadvantage if they had to use imported or protected inputs.
Establishing a duty-free zone or giving rebates on the tariffs paid on imported
inputs is one solution. As a short-run measure, this will probably be the
fastest and easiest way of entering the labor intensive assembly for export
areas. But as a long-run solution it is not entirely satisfactory. It leads
to a preference for imported inputs over domestically produced inputs, since
the latter are presumably priced so as to take advantage of the tariff protection
and also may be using imported inputs on which no rebate is available. The only
satisfactory scheme would be one in which the exporter received the tariff rebate
on his inputs, regardless of their source.
Maintaining an outward-directed industrialization strategy will not be easy. There will always be a strong temptation to aim exclusively for the secure, protectable domestic market. The voices of protectionism are likely to grow stronger, not weaker, as Indonesia's manufacturing sector expands in the short-run. The current banned import list could be a taste of what might happen in the future. But the long-run costs of an inward-looking, protectionist strategy are clearly very high. I believe that Indonesia can and should avoid them.
Notes

1. The two larger less developed countries -- Mainland China and India -- both have controlled foreign sectors.


3. Ibid, p. 17

4. BIES VI, No. 2 (July 1970), pp. 142-147.

5. Arndt and Ross (1970), Table 2, p. 49.

6. For a further discussion of the inflation and the stabilization program, see Arndt (1971), Glassburner (1971), and Tomasson (1970).

6a. See Boucherie (1971).

7. A maximum rate of 1500% per year was reached between June 1965 and June 1966.

7a. In 1969, the government switched the fiscal year from one that was identical with the calendar year to one that begins on April 1.

8. To the extent that aid was tied and worth less than free foreign exchange, debt repayments would have been yet more costly for the economy and not just symmetrical with aid.


11. See BIES VI, No. 2 (July 1970), pp. 142-147, and BIES VII, No. 2 (July 1971), p. 3.

12. In this section, I have made extensive use of the "Survey of Recent Developments" contained in every issue of BIES. See also Glassburner (1970) and Hollinger (1970).


14. Rupiah were issued for old ones at the rate of one new rupiah for 1,000 old rupiahs.

15. The cess and rehabilitation fund levies are supposed to be spent on infrastructure relating to the taxed exports (e.g., roads, warehouses, shipping facilities, research). There has been a great deal of dissatisfaction on the part of producers and exporters, who have not perceived many new facilities being generated by these taxes. This may have been one of the contributing factors in the decision to reduce them in August 1971.
16. Total imports are listed in the balance of payments as $1,138 million on an FOB basis. An 11% factor is usually applied to bring imports up to a CIF basis. This yields $1,263 million. Bank Indonesia gives a break-down of $1,132.7 million on a CIF basis, excluding imports for the oil companies. These last were $92 million on an FOB basis or $102 million CIF. This leaves $28 million which was unclassified.


20. Ironically, though, there was a point in 1968 at which the World Bank questioned whether Indonesia had perhaps gone too far too fast in opening up its foreign exchange system and permitting unhindered capital movements.

21. For a full discussion of the banking system, see Cole (1969); Gurley (1970); and Arndt (1971).

22. A complete discussion of the import and assembly of automobiles in Indonesia is found in Hansen (1971).

23. See Baranson (1967).


28. Or, as Balassa and Schydlofski (1968) have demonstrated, the DRC can be expressed as a weighted average of the ERP's of the inputs.


30. True private profitability may well be greater than the levels shown in the applications, if the stated depreciation, management fees, payments for loans and capital goods from the parent company, etc., are higher than the true costs.

31. See Boucherie (1971).

32. This assumes a constant level of world selling prices for the commodity. If the world price of a particular commodity falls, exports of that commodity will be discouraged. If all export prices fall, one would expect a devaluation to compensate for it.

33. Though, at the rates of interest prevalent in the Indonesian economy, large inventories are not likely.

35. See Boucherie (1971).

36. For a complete discussion of these issues, see Little, et. al. (1970).
Bibliography


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