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Domestic Capital Formation in Indonesia

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In Indonesia, the proportion of private capital formation, particularly that of the household savings, is comparatively low, mainly because of higher consumption levels, and low tax burdens. A major proportion of investment is financed from foreign sources: export of oil and foreign borrowings. On account of falling prices of oil exports, her already high foreign indebtedness and increasing debt serving charges, Indonesia faces serious constraints in raising foreign capital. Thus, she will have to step up efforts to tap domestic sources such as increasing non-oil exports, generating government savings, and cutting down imports to maintain the investment level.

I. Introduction

Acceleration of capital formation has been emphasized in the literature on economic development basically from two considerations. Firstly, the periods of "take-off" have been generally associated with increase in the rate of capital formation, irrespective of differences in the social, political and economic institutions. Secondly, in most of theoretical growth models,[1] great importance is attached to the rate of capital formation. Examining the pattern of economic growth in Indonesia during 1968-81, Sundrum[2] finds capital formation, promoted through various fiscal and monetary policies, export earnings, foreign capital, etc., as the major determinant of economic expansion. Identifying specific components of economic growth in Indoensia, Sundrum finds capital widening (growth of capital accompanying growth of employment), capital deepening (increase in capital per worker: growth of productivity of labor assuming employment to be constant) and technological

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1 See Harrod (1952, 1960) and Domar (1957).

2 See Sundrum (1986), pp. 50-54.

progress, as key determinants of rapid growth rates during different parts of the period 1960-1981. The social and economic structure of the Indonesian economy is, thus, such that capital formation presently is, and will continue to be in the future, a crucial factor in her economic expansion. In this paper, we will discuss some aspects of capital formation in general and domestic capital in Indonesia in particular.

II. Pattern of Domestic Capital Formation in Indonesia

Unfortunately, the breakdown of data on various components of capital formation are not available in respect of many underdeveloped countries including Indonesia and also estimates made by different agencies use different methods. Table 1 gives estimates on gross domestic savings and private consumption for some categories of developing economies and also Indonesia.

Table 1

GROSS DOMESTIC SAVINGS AND CONSUMPTION IN DEVELOPING ECONOMIES 1965-1984
(Percent of Gross Domestic Product)

	Gross domestic savings		Private consumption	
	1965	1984	1965	1984
Low-income economies	19	23	68	64
Middle-income economies oil exporters	21	25	68	62
Upper Middle, income economies	24	26	65	65
Indonesia[a]	6	20[b]	88	70

Note: [a]Indonesia falls in the category of middle income oil exporting countries.
[b]This figure is not comparable to data in Table 2, having been estimated by the World Bank using different methodology. It is, however, quite useful for comparative purposes.

Report, 1986, pp. 188-189.

It may be noted that Indonesia's domestic savings as a proportion of GDP is lower than that of countries in the oil exporting middle income category (to which category Indonesia belongs) or even compared to coun-

tries in low income economies. This lower figure for savings is a reflection of the higher level of private consumption, as a proportion of the GDP, as indicated by figures in Table 1. Due to the low rate of domestic savings, Indonesia has to put reliance on foreign capital to meet her investment needs. The sources of Indonesia's domestic investment during 1978-1984 have been estimated as in Table 2.

Table 2

SOURCES OF TOTAL DOMESTIC INVESTMENT DURING 1978-1984[a]
(Percent of Gross Domestic Product)

	1978-79	1981-82	1982-83	1983-84
Gross Domestic Investment	20.5	21.4	22.6	22.0
Households + Business Savings	9.5	9.7	9.5	8.7
Government Savings	7.9	8.7	8.2	8.0
Budgetary Savings	6.6	8.1	7.7	7.5
Public Enterprises	1.3	0.6	0.5	0.5
External Borrowing (net)	3.1	3.0	4.9	5.3

Note: a The data is for fiscal years.
Source: Calculated from data in World Bank, *Indonesia Policies and Prospect for Economic Growth, 1984, World Development Report, 1986* and Biru Pusat Statistik; Statistik Indonesia, 1984.

Table 3

ANNUAL AVERAGE OF REAL FOREIGN EXCHANGE
INFLOW TO INDONESIA 1968-81
(in millions of U.S. dollars)

	1968-81		1973-81	
	Value	(%)	Value	(%)
Exports	1,927	74	7,835	90
oil	834	32	5,651	65
non-oil	1,983	42	2,184	25
Net Foreign Borrowing	407	16	1,013	11
Direct Investment and Other Net Private Inflow	267	10	−97	−1
Total Foreign Exchange Receipts	2,601	100	8,751	100

Source: Adapted from: R.M. Sundrum, "Indonesia's Rapid Economic Growth," *Bulletin of Indonesian Economic Studies,* Vol. 22, No. 3, December 1986, p. 43.

The foreign exchange inflow played a crucial role in the total investment in the Indonesian economy, particuarly after 1973 with big increase in oil prices. During the periods 1968-81 and 1973-81, the total inflow of foreign exchange amounted to, on an annual average, $2.6 billion and $8.75 billion respectively (Table 3), which consisted of value of oil exports, foreign borrowings and direct foreign investments.[3] Note the big jump in the income from oil exports after 1973, which boosted the share of gross capital in the gross domestic product as in Table 4.

Table 4

SHARE OF THE GROSS CAPITAL FORMATION IN THE GROSS DOMESTIC PRODUCT IN INDONESIA 1969-1981

	Gross Capital (%)
1960-66	10.9
1967-72	14.1
1973-81	20.0
1982-83	20.3

Source: R.M. Sundrum, "Indonesia's Rapid Economic Growth," *Bulletin of Indonesian Economic Studies*, Vol. 22, No. 3, December 1986, p. 49.

From the above discussion and statistical information in Tables 1-4, the following trends emerge out on the pattern of domestic capital formation in Indonesia:

1) The proportion of private capital formation, particularly that of the household savings, is low as compared to other developing countries in the middle income group (where Indonesia fits in) or even in lower income categories.
2) A substantial proportion of the domestic investment comes out of the foreign income inflow from export of oil and foreign borrowing.
3) Much of the indonesian economic growth during 1966-1984 was contributed by capital formation: both capital widening and capital deepening.

[3] World Bank (1986), p. 186.

III. Constraints for Capital Formation in Indonesia

The figures on private consumption as a proportion of GDP indicate that the ratio 70 percent in 1984 is higher than the corresponding ratios 62-64 percent in both the middle income and lower income developing countries, respectively. The private consumption expenditure grew at an annual rate of 9.1 percent durng 1973-74 in Indonesia, against the corespnding figures of 5.1 percent and 5.6 percent for low income and middle income oil exporter economies, respectively during the same period.[4] Several factors account for this higher proportion of consumption expenditure in Indonesia. Better income distribution (as indicated by fall in the value of Gini coefficient during 1980-84), rural-urban shift, demonstration effect of the Western consumption patterns as reflected by significant increase in expenditure on luxury items and imported gadgets and also increase in income unaccompanied by corresponding increase in taxes. The burden of various taxes, affecting the level of consumption, is lower in Indonesia compared to other developing countries as indicated in Table 5 below.

Table 5

TAX BURDEN IN DEVELOPING COUNTRIES 1978-80
(Percent of GDP)

	Income Tax (individual)	Sales/VAT	Excise	Wealth & Property
Average of low income countries	1.22	1.71	1.63	0.26
Average of middle income countries	1.90	1.54	2.05	0.32
Indonesia	0.42	1.09	0.95	0.32

Source IMF, Fiscal Affairs Department, "Quantitative Characteristics of the Tax System in Developing Countries," 1983. DM/83/79.

In terms of the total tax revenues, as a proportion of GDP, a cross-country comparison would show that excluding taxes on oil income, the ratio of tax burden to the GDP is one of the lowest in respect of Indonesia.

4 See Mooy (1975), pp. 117-124.

Table 6

SHARE OF TAX REVENUES FROM NON-OIL INCOME IN
GROSS DOMESTIC PRODUCT IN SELECTED COUNTRIES: 1981-82

Country	Non-Oil Tax Revenue as % of GDP
Thailand	13.4
Philippines	12.3
Pakistan	14.5
India	14.1
Sri Lanka	22.2
Indonesia	5.9

Source World Bank, *Indonesia: Policies and Prospects for Economic Growth and Transformation, 1984,* p. 63.

Thus, Indonesia does have a potential to raise greater tax revenues by appropriate fiscal measures including improvement in tax administration and compliance. This can certainly increase government savings (assuming no corresponding increase in general government expenditure) and raise the level of public savings component of the domestic capital formation. The newly enacted Income Tax Law (Pajak Pengliasilan) and the Value-Added Tax aim at increasing tax revenues for greater capital formation for planned economic development. The extent to which the new tax laws would be effective to raise the planned additional revenues will determine the magnitude of domestic capital formation in the economy to a considerable extent.

Though no reliable data are available on the proportion of household savings in the total private savings in Indonesia, yet on the basis of various indirect observations, one can assume that it is quite low. It is maintained that the household savings are particularly low in rural areas, where most of the population resides and works. According to a crude estimate,[5] the share of rural household savings in the total household savings (which itself is only a part of the total private savings), is only 16 percent. With 72 percent of the total population living in rural sectors, this rather low proportion of rural household savings reduces the overall household savings in the country.

[5] See World Bank (1984), p. 14.

There are several causes for the low rate of rural household savings. Besides comparatively lower incomes and inadequate banking facilities to mop up savings, there are some social and cultural factors, such as the pattern of living of rural rich and also well-to-do families, who should have the greatest capacity to save. Most of these families get income from rent on land and plantations. Traditionally, they belong to classes which had close ties with the ruling elite. They spend lavishly on marriages and other social and religious ceremonies, to maintain their social and political influence in the society. By living frugally, some landholders and landless laborers may be able to save in good crop years, but in bad years, they are forced to spend more than their incomes. Over a period of time, however, they are, therefore, unable to generate much savings. Their high degree of indebtedness to moneylenders makes this point evident. Rural cooperative credit societies and other rual banking and financial institutions can play important roles in channelling whatever savings might be available into capital formation. Several schemes operating in Indonesia: Village Cooperatives, National Development Savings (TABANAS), and Small Loan Scheme (Kredit Desa) have shown good results, but still they have to go a long way to generate and mop up more rural savings. Since, as a World Bank study remarks, "Access to banking facilities, especially in rural areas, is still very limited. Vigorous efforts by the state banks to expand banking facilities in rural areas are, thus, needed."[6]

As we have pointed out earlier (Table 3), foreign exchange inflow has been an important factor in the Indonesian capital formation, particularly with increase in world oil prices during the seventies. The resulting effect of the rapid increase in oil prices was highly favorable by virtue of Indonesia being a significant oil exporter. The successive oil price rises during the seventies sharply boosted Indonesia's export earnings — from 16 percent of GDP in 1972 to 32 percent in 1980, the terms of trade improved by more than 200 percent between 1973-1980 and the investment expenditure, particularly in the public sector, increased at an average of about 13 percent per annum.[7] As pointed out in Table 4, the gross domestic capital as a percent of the GDP increased from 10.9 in 1960-66 to 14.1 during 1967-72 and 20.3 during 1982-83.[8] All these developments contributed to rapid economic growth of the economy. The average annual rates of growth before and after the "oil boom" are given in Table 7.

[6] *Ibid.*, p. 2.

[7] Sundrum (1986), p. 43.

[8] World Bank (1984), p. 76.

Table 7

ANNUAL RATES OF GROWTH OF GROSS CAPITAL AND GDP 1967-1983
(constant 1973 prices)

Period	GDP	Gross Capital Formation
1960-67	0.56	–0.04
1973	8.10	18.3
1977	8.76	24.5
1981	7.93	28.00
1982	2.24	29.51

Source: R.M. Sundrum, "Indonesia's Rapid Economic Growth 1968-81," *Bulletin of Indonesian Economic Studies,* Vol. 22, No. 3, 1986, p. 42 and World Bank, *Politics and Prospects for Economic Growth Transformation,* 1984.

Unfortunately, however, the fortunes of the oil exporting developing countries, including Indonesia, started declining with the tumbling of world oil prices from 1983 onwards and recessionary trends in the western economies, particularly the United States. While the decline in oil prices reduced drastically the value of Indonesia's oil exports, which, in turn, greatly reduced the GDP, the government tax revenues, and worsened her terms of trade. The recessionary trends in Indonesia's several trade partner countries also stood in the way of increasing export of non-oil exports. Some major economic variables affected by fall in oil prices are given in Table 8.

Table 8

CHANGES IN THE VALUES OF SOME VARIABLES IN INDONESIA FROM THE FALL IN WORLD OIL PRICES AND RECESSIONARY TRENDS IN INDONESIA'S TRADE PARTNER COUNTRIES, 1983-85

Indicators	1983-84	1984-85
Export of goods and services	2.8%	–7.6%
Import of goods and services	–15.8%	–5.5%
Terms of Trade (ratio)	0.99	0.97
Gross Domestic Capital Formation	–5.2	–4.4
Gross Domestic Product	6.1	1.9

Source: Anne Booth, "Survey of Recent Developments," *Bulletin of the Indonesian Economic Studies,* Vol. 22, No. 3, December 1986, p. 4 and World Bank, *Indonesia's Policies and Prospects for Economic Growth, 1984.*

In the budget for 1983-84, revenues from oil and liquified natural gas (LNG) decreased as a proportion of total government revenues from 70.7 to 66.0 in 1983-84. To meet this huge delcine in tax revenues, the government undertook some austerity measures including cutting down on both general and development budgets. However, there was still a gap to the tune of 3.7 percent of GDP in planned public sector investment, which was proposed to be met mostly from domestic as well as external borrowing. The gross domestic capital formation as a proportion of GDP, declined by 5.2 and 4.4 percent during 1983-84 and 1984-85 respectively. The government has taken some drastic measures, including the devaluation of the rupiah in September 1986, to enhance competitiveness of her non-oil exports to close the projected current account deficit of about $4.8 billion during 1986-87 and instill confidence in the international money markets to enable Indonesia to borrow foreign funds at favorable rates, to meet any shortfall in domestic resources. While Indonesia is making all out efforts to increase her non-oil exports, reduce general government expenditures, cut imports, trying hard to implement new tax laws to increase the tax base for greater revenues, etc., but still Indonesia will need to resort to a significant amount of foreign borrowing to finance her planned investment.

Some other constraints facing Indonesia for promoting capital formation, particularly through foreign borrowing include: her already high

Table 9

GROSS EXTERNAL LIABILITIES OF LOW AND MIDDLE INCOME COUNTRIES AND DEBT SERVICING CHARGES, 1984

Countries	Total Gross External Liability (millions of $)	% of GNP	Total Long-Term Debt-Service as % of GNP	% of Exports of Goods & Services
Indonesia	32,480	35.2	5.5	19.0[a]
India	30,678	13.6	1.1	13.8
Philippines	24,383	43.9	4.5	17.9
Turkey	22,267	14	4.6	23.8
Thailand	15,278	32.8	5.4	21.5
Mauritius	13,164	36.5	7.9	15.6
Senegal	11,565	69.4	4.2	n.a.

Note: a The ratio of debt service to total exports which stood at 19.0 percent in 1984 was only 8.60 and 12.38 percent during 1981 and 1982 respectively.

Source: World Bank, *World Development Report 1986*, pp. 208-215.

foreign indebtedness and increasing charges for debt servicing. Amongst the low and middle income countries, Indonesia has the highest total gross external liabilities with increasing debt service charges.

IV. Conclusion and Policy Implications

Though Indonesia continues to enjoy a good credit rating in international money markets through regularly discharging her debt obligations, yet still she will, sooner or later, have to consider other alternatives to obtain capital for development plans. One of the alternatives is to boost her non-oil exports but here too Indonesia faces several tough problems. Firstly, there is the emergence of protectionism in western developed countries: putting restrictions on import of primary commodities, textiles and clothing, which constitute most of Indonesia's non-oil exports. Secondly, in these very export items, Indonesia faces uphill competition from several other developing countries (e.g., Malaysia, Singapore, Korea, Taiwan, India). The share of the export of non-oil commodities in her total exports has already fallen to a low figure of 12 percent in 1984. Indonesia will need to take bold steps to boost her exports by making them more competitive by reducing any unnecessary costs and reconstructing her tariff and non-tariff policies. The recent drastic step of devaluation in September 1986 has also been taken partly towards this end.

Another factor which would affect her future capital needs to achieve the planned higher rate of growth, is the value of incremental capital output ratio (ICOR). For various reasons, e.g., the use of capital intensive technology, inefficiency in the use of complementary inputs, the ICOR has been rising steadily in Indonesia since the last decade. According to a World Bank study, this ratio increased from 1.4 in 1966-71 to 2.4 and 2.9 during 1971-76 and 1976-81 respectively.[9] In other words, a higher rate of capital formation will be needed in the future to attain a given rate of economic growth. However, Indonesia can, to some extent, reduce this increasing ICOR ratio by reevaluating her investment strategies, by substituting her abundant labor for scarce capital and also by improving efficiency in the use of complementary inputs and in management practices.

Indonesia faces an uphill task to meet the challenge of promoting capital to achieve the planned economic growth in the face of several impediements, most of which, however, are exogenous, e.g. falling oil prices, recessionary conditions and the emergence of protectionism in the

[9] *Ibid.*, p. 203.

western world, fierce competition for exports of primary and consumer goods. The best course for Indonesia seems to be to mobilize her own domestic savings: both private and public, and make her exports competitive in the world market by removing any inefficiencies: structural, managerial or financial. Indonesia also needs to pay more attention to the promotion of domestic capital formation by making appropriate use of her abundant manpower resources in producing mass consumption goods and services which require labor intensive technologies and for which there is a huge potential domestic market. Though foreign borrowing may be a necessity in the short run, yet in the long-run the consequences of huge foreign debt could be more serious than sometimes anticipated. The high debt servicing charges can arrest the future growth of the Indonesian economy as several countries are now experiencing in Latin America.

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