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Indonesia
Financial Resources and Human Development in
the Eighties

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CURRENCY EQUIVALENTS

Before November 15, 1978

US\$1.00 = Rp 415
Rp 1.00 = US\$0.0024
Rp 1 million = US\$2,410

After November 15, 1978

US\$1.00 = Rp 625
Rp 1.00 = US\$0.0016
Rp 1 million = US\$1,600

FISCAL YEAR

Government - April 1 to March 31
Bank Indonesia - April 1 to March 31
State Banks - January 1 to December 31

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INTRODUCTION

Like the two previous annual economic reports on Indonesia,^{/1} this one concentrates on the need for structural adjustment in the Indonesian economy if the rapid development that characterized the 1970s is to be maintained throughout the present decade. A number of policy and institutional reforms were recommended in the earlier reports as essential for Indonesia's continued successful transition from oil dependency to a more diversified modern economy. Specifically, emphasis was given to the trade regime, investment licensing, domestic resource mobilization, financial intermediation and price policy. Without such reforms severe financing problems were projected to emerge in the mid-1980s. These general themes are echoed in this report.

Inevitably, the sharp deterioration in Indonesia's balance of payments and short-term resource prospects, due to the severity and persistence of the current international economic recession and the weakening international oil market, required a major revision of the macro-economic and financial projections that were presented in last year's report. In addition, special attention has been given in this report to the subject of human resource development. Based on a broad evaluation of past progress with regard to employment, education, food supply and nutrition, health, sanitation and shelter, the report assesses future development needs in these areas and discusses estimated financing needs during the remainder of this decade within the context of the revised macro-economic resource projections.

Since the report concludes that most public sector programs for human resource development deserve and require a major expansion in size and coverage, the downward revision of export and fiscal revenue projections lends special urgency to the question of whether the financing of these expanded programs is, in fact, within the country's means. The contrast between the urgency and magnitude of Indonesia's development needs and the sharp, unpredictable fluctuations in its resource position, presents a fundamental and agonizing dilemma to the country's policy makers. Should there be cutbacks in the Government's development program or can the "momentum of development" be maintained or even increased?

This report takes the view that the strength of Indonesia's current external reserve position, its international borrowing capacity, the underlying strength of medium term prospects for non-oil exports, and the

^{/1} Report No. 2788-IND, dated February 20, 1980 and Report No. 3307-IND, dated April 6, 1981.

room for additional domestic resource mobilization, are such as to justify for the time being the continuation of the large public investment program and a high growth strategy in general. Like previous reports, this one argues that there are compelling social and economic reasons, including the need to provide productive employment for almost 20 million new entrants into the labor force during this decade, why Indonesia can ill afford to slacken the pace of development. The risks associated with cutting back development programs, in the face of the sharp and unexpected fall in revenues, are greater than the risks associated with maintaining a rapidly expanding development program. Because of prudent macro-economic management during recent years and the accumulation of external resources and de facto budgetary surpluses, the Government can face the unexpected decline in export earnings with a measure of confidence and with considerable room for manoeuver in maintaining internal and external financial balance. Among the large developing OPEC countries this is a rare accomplishment.

This report is divided into two parts. Part I presents a brief overview of recent economic developments (Chapter 2), an analysis of projected public sector finances (sources and uses of funds) in the 1980s within the context of a comprehensive macro-economic projection framework (Chapter 3), and a discussion of balance of payments prospects and external borrowing needs (Chapter 4).

Part II is devoted to aspects of human resource development. It starts with revised employment and labor force projections based on the results of the 1980 Population Census and an analysis of empirically observed relationships between sectoral output growth and employment growth (Chapter 5). This is followed by an evaluation of past progress and future development needs in the fields of education, health, nutrition and food supply, shelter, water supply and sanitation (Chapter 6).

In addition, the report contains three annexes. Annex I contains detailed macro-economic projections. Annex II contains a description of the methodology used in the population, labor force and employment projections underlying the analysis in Chapter 5. Finally, there is a statistical annex containing historic data.

1. SUMMARY AND CONCLUSIONS

PART I. ADJUSTMENT AND GROWTH IN THE EIGHTIES

An Overview

1.01 The deterioration in the international economic environment in the past 12 months has led to a sharp change in Indonesia's external financial prospects for the near-term at least. A year ago, the balance of payments surpluses of 1979 and 1980 were expected to continue for several more years. In fact, the current account surplus of \$2.5 billion in 1980/81 has been replaced by a deficit of \$2.5 billion in 1981/82 - a \$5 billion deterioration in the external payments position, or the equivalent of about 5% of GDP.

1.02 Despite this deterioration, the Indonesian economy has performed remarkably well in the past year. Fueled by continued strong investment outlays in both in the public and private sectors, and by yet another record rice harvest, GDP grew by about 8% in real terms in 1981. As a result, GNP per person rose to \$520 in 1981, thereby placing Indonesia firmly in the ranks of the middle-income countries for the first time. The Government has claimed - with considerable justification - that in comparison with earlier times, the resilience of the Indonesian economy in the face of a hostile international economic environment has greatly improved. The reasons for this change are: the Government's concerted efforts to develop the non-oil economy, particularly agriculture, on which the livelihood of so many Indonesians depends; and more recently, the very prudent management of the windfall income from the 1979/80 oil price increase. Indonesia is one of the few oil-exporting developing countries which has succeeded in developing its non-oil economy to the point where the growth momentum is not immediately threatened by the current weakening of the international oil market.

1.03 In the past year the Government has moved vigorously to safeguard the country's capacity for continued rapid development with its decision to sharply reduce subsidies on domestic oil consumption and with additional measures to promote non-oil exports. Of course, a great deal more remains to be done to ensure that the policy and institutional framework is conducive to sustained long-term growth in incomes and employment. But this report takes the view that the strength of Indonesia's external reserve position, its international borrowing capacity, the underlying strength of medium-term prospects for non-oil exports, and the considerable scope for additional domestic resource mobilization, when coupled with the Government's demonstrated capacity to make needed policy changes, are such as to justify continuation of the large public investment program and the high growth strategy in general, at least for the time being. This is not the time to

consider restricting imports through the use of quantitative restrictions or higher tariffs for balance of payments management purposes. Such a policy would run the risk of severely jeopardizing economic growth prospects in general and manufactured export growth in particular; it would foster inefficiency and would create inflationary pressures in the economy resulting in reduced investor confidence and a loss of international competitiveness. These issues are discussed in Part I of the report. The report goes on to argue in Part II that, in pursuing this adjustment strategy, special emphasis must be placed on human resource development throughout the 1980s to lay the foundation for sustained and equitable progress in future years.

1.04 As in last year's report, this one presents two sets of projections the High and Low cases. The former describes a policy package designed to continue a smooth adjustment in the structure of the economy away from an excessive dependence on the oil sector, without sacrificing economic growth. Four broad policy adjustments are identified as critical to this transformation: (a) continued movement away from a trade regime favoring import substitution activities towards a more neutral system; (b) a simplification of the investment and regulatory environment; (c) an improvement in domestic resource mobilization and in the efficiency of financial intermediation; and (d) the adjustment of domestic prices to reflect economic costs. The re-emergence of a balance of payments deficit over the past 12 months has underscored the urgency of adjustment along these lines. The policy actions of the Government in the recent past have been consistent with the changes needed to ensure continued rapid development along the lines set out in the High case. If, for some reason, continued progress in implementing required policy and institutional changes was seriously undermined, then the growth scenario described by the Low case would, in all likelihood, prevail. This scenario projects a rapidly deteriorating resource position requiring investment cut backs and slower growth in incomes and employment. Development along the lines described by the High case would result in an average increase in GDP of about 7.5% p.a. in real terms during the 1980s. In the low case, on the other hand, output would increase much more slowly, especially in the second half of the decade, and, for the 1980s as a whole, GDP would rise by about 5.5% p.a. in real terms. This means that GDP per person would increase from \$520 in 1981 to about \$830 in 1990 (in 1981 prices) in the High case, but to only \$700 in the Low case. In other words, income per person for the 180 million Indonesians in 1990 would be 20% higher under the High case, and aggregate output (in 1981 prices) would be higher by some \$23 billion.

Domestic Resource Management Policies

1.05 In the first half of the 1970s, gross investment grew very rapidly, expanding in real terms by about 18% a year, and then slowing to

about 12% a year in the second half of the decade. In the latter part of the 1970s in particular, the Government was able to pursue a broadly based investment strategy in which public investment (by the Central Government and public enterprises combined) expanded by about 14% a year in real terms and private investment by almost 10% a year. By 1980/81 about 22% of GDP was allocated to investment, of which about half was undertaken by the private sector and half by the Government and public enterprises.

1.06 The Third Five Year Development Plan (Repelita III) will end in March 1984, and the Government is currently in the process of formulating strategies for Repelita IV. The report assesses public investment alternatives over the coming years in the light of the development needs and the programs to which the Government is already committed. However, the pattern of public investment described does not refer to an approved Government program. To maintain a GDP growth rate of about 7.5%, while continuing the rapid expansion in social programs, it concludes that public investment would have to grow by about 16% a year in the 1982-86 period, while private investment would increase at about 9% a year in real terms. Gross investment would therefore continue to expand at about 12% a year and its share in GDP would rise to about 27% by 1985. In the second half of the decade, the growth of public investment is projected to slow down to about 7% per year in real terms, whereas private investment is projected to continue expanding at about 9% a year, and could even accelerate. The share of gross investment in GDP would rise marginally to about 28% in the latter part of the decade.

1.07 The continued rapid growth in Government investment does not arise from any one source, but for the most part represents a broadly based expansion in physical and social infrastructure, designed to lay the foundations for sustained growth in the latter part of the decade and in the 1990s. The higher growth in public enterprise investment expenditures stems from a major expansion in tree crop development in the Outer Islands, the acceleration of investments in power generation and transmission, and the start of a number of large, capital-intensive projects in the industrial sector. Central Government investment in the agriculture sector is projected to grow at 14% a year in real terms throughout the decade; this will be required if agricultural output is to continue growing at about 3.5% a year. Public enterprise investment in agricultural estates is expected to grow much more rapidly than that in the first half of the decade but to slow down thereafter. Inadequacies in basic infrastructure - power generation and transmission, transport, communications and storage - are increasingly serious constraints to continued rapid development. High economic growth has placed considerable strain on existing transport facilities in particular. Additional investment in the sector is especially urgent in linking resource-based investments in the Outer Islands with output and income growth on Java. To meet demand for transport services, which is projected to grow at about 12% a year, public investment outlays will have to expand in real terms at about 14% annually between now and 1986. The needs of the power sector have recently been reviewed in detail under the auspices of a UNDP/World Bank energy assessment program; it was concluded

that investment in the sector would have to expand by about 13% a year during the 1980s if commercial needs for electric power are to be met, and if there is to be some progress towards expanding household access to electricity. The investment needs in human resource programs are explored in Part II of the report. For the decade as a whole investment in education, health, water supply, sanitation and housing would need to grow at about 13% a year in real terms to lay the foundations for continued rapid development and to improve access to basic public services.

1.08 This would be an ambitious program, and there is a question as to whether it could be fully implemented. There are three main concerns here. First, project planning and implementation has, in the past, been affected by such problems as long delays in initiating projects and in construction schedules that, in turn, led to cost overruns. Significant efforts have been made to overcome this problem; further measures to build up sectoral and project planning capacities of the line agencies will be needed. Second, it is essential that close attention be paid to the maintenance of public facilities and equipment. Routine budgetary allocations should be based upon the existing capital stock to be maintained. Over the longer term there is little scope for squeezing routine expenditure on personnel and materials in order to raise public saving, although efficiency in using routine outlays can undoubtedly be improved in the near-term. Finally, if the proposed investment program is to be successfully implemented the construction industry will have to be strengthened and expanded. Over the decade, it will have to grow at about 10-12% a year. An improvement in the working environment for the construction industry will involve simplification of contracting procedures, elimination of inequitable practices, and arrangements to improve the flow of funds to contractors. The Government is aware of these problems and is considering proposals for improvements in contracting procedures, credit availability, and training facilities.

1.09 Raising the gross investment rate from the current level of 22% to 27% of GDP by 1985 will require vigorous efforts to promote domestic savings, which, in 1981, were about 25% of GDP. Increased savings must be achieved despite the fact that oil revenues - an important source of domestic savings - will become relatively less important in the 1980s. The report addresses three important domestic revenue mobilization issues:

- (a) Can Central Government revenues be expanded sufficiently to meet the projected real increase in recurrent outlays and finance a major share of the Government investment program?
- (b) How can the major expansion in public enterprise investment be financed, since their retained earnings will be sufficient to meet only a small part of the program?

- (c) Inasmuch as private domestic savings will be needed to finance part of the public investment program, what measures will be needed to promote these savings in a financial form?

1.10 Oil revenue projections are based on the assumption that export prices remain unchanged in 1982/83, then rise at the same rate as international inflation until 1985/86, and thereafter rise in real terms by 3% a year. Production is assumed to fall to an average of 1.45 mbd in 1982/83 and thereafter to rise to 1.83 mbd in 1985 and 2.0 mbd in 1990. Under this scenario, budgetary revenues from oil exports are projected to rise in nominal terms by about 8% a year over the decade, equivalent to a decline in real terms. The greatest potential for increased revenues therefore comes from domestic sales through subsidy elimination. As a result of the 60% increase in domestic oil prices in January 1982, the Government has raised an additional Rp 1.2 trillion over what would have been available had no increase occurred, equivalent to 14% of the development budget. On average, domestic oil prices, which were 35% of international equivalents in 1981, have been raised to 56% in 1982. Despite this very important step, subsidy levels remain high. The economic subsidy is now about Rp 2.4 trillion, equivalent to 3.8% of GDP, down from almost 6% last year. Under the High policy case, it is assumed that domestic oil prices will continue to be raised, so that all economic subsidies will be eliminated by 1990. This will require on average a 7% real price increase per annum. It would provide an additional Rp 1.6 trillion to the Government annually by 1985 and an additional Rp 7 trillion annually by 1990, when compared with the Low policy case, which assumes a slower growth in domestic prices.

1.11 The Government is giving high priority to raising non-oil taxation. A comparison with other countries, including other oil exporters, shows that Indonesia is taxed well below its potential. The report suggests that the tax buoyancy (the responsiveness of tax revenues to overall economic activity) could be raised from the historic level of 1.0 to 1.5. The greatest potential for increasing revenues is in corporate income tax, sales tax, and the Ipeda land tax. A combination of these tax increases and subsidy reductions would result in an increase of domestic revenue from 5.0% of GDP in 1980/81 to 13.5% in 1990/91. This would effectively compensate for the decline in oil export revenues, and would ensure that total Government revenues stay around 20% of GDP.

1.12 In financing the proposed public enterprise investment program, which is projected to grow by about 19% a year in real terms in the first half of the 1980s, the Government faces a major challenge. In the past, during the period of relative revenue abundance, public enterprises have relied to a large extent on capital transfers from the budget for investment financing. In the future it will be necessary to finance a smaller proportion of public enterprise investment from the Central Government.

Fortunately, there is good potential for obtaining finance from other sources; these include: (a) increasing self-financing through operating surpluses of the public enterprises; (b) raising domestic borrowing; and (c) encouraging private equity participation in public sector investment. Public enterprise borrowing through the bond market is highlighted in the report as having a major potential for mobilizing domestic institutional and private savings. Until now, however, there has been a reluctance on the part of public enterprises to submit themselves to the required financial discipline while the cheaper and easier route has been to approach the Government for funds. A high priority should be given to the re-establishment of a domestic bond market and particular emphasis should be given to financially sound enterprises with substantial assets, such as PLN and some of the public estates (PTPs). The introduction of a domestic bond market would be one aspect of the financial reform program required to mobilize savings and improve the link between savers and investors. Currently, in the absence of attractive long-term financial instruments, savers find other channels for their funds, including lending offshore, speculating in real estate, and holding gold. None of these is particularly helpful to the country's development.

1.13 Under the High case there is every reason to be optimistic about the coming years. The major uncertainties in this outlook derive from the possibility that, for one reason or another, the Government may not move as rapidly as necessary to adopt the policy reforms necessary for sustained rapid growth, and the possibility that the international oil price may be substantially lower than projected. If the required policy adjustments are not taken (the Low case prevails), the domestic resource outlook is bleak. Total Government revenues are estimated to be 13% lower than under the High case by 1985/86 and 28% lower by 1990/91. Public savings would be correspondingly lower - by 20% in 1985/86 and by 40% in 1990/91. Under these circumstances, the proposed public investment program would be unmanageable, particularly in the second half of the decade. The Low scenario, therefore, inevitably involves a slower growth of production and exports, which in turn would imply a lower sustainable inflow of foreign debt. In this case the Government would have no choice but to severely cut the growth of public expenditures, threatening employment growth, economic investments and/or human development programs.

1.14 The report also describes a "low oil price scenario" in combination with the High policy case. In this scenario it is assumed that the price of crude falls to an average of \$30.50 per barrel during 1982/83 (compared with \$35.50 per barrel in the High case) and thereafter remains constant in real terms. The price of LNG is assumed to behave in a similar manner. Over the next four years the total reduction in Government revenues would be about Rp 7.6 trillion (\$12 billion), equivalent to 2% of GDP. In the second half of the decade the cumulative loss would amount to almost

Rp 20 trillion (\$32 billion), or about 2.5% of GDP. The report concludes that while, over the next four years at least, it would be possible to compensate for the revenue decline without a major reduction in the investment program, this would only be possible with a major effort of resource mobilization and subsidy elimination over and above the rather ambitious program already set out under the High policy case. Such a program would impose an additional effective tax burden on private consumption. Whether such a policy course is appropriate depends more on political than on economic considerations.

Balance of Payments Prospects and External Borrowing

1.15 Because of the sharp deterioration in the international economic environment, the balance of payments picture presented in this report is rather different - particularly for the next two or three years - from that presented in last year's report. The current account surplus, which had been projected to continue for most of the first part of the decade has disappeared already. When cumulated over the five year period 1981/82-1985/86, the current account is now projected to be almost \$27 billion worse than projected last year. As noted above, it should be possible to maintain the levels of income, investment and employment growth projected a year ago (the High case) through a combination of a higher level of external borrowing and a lower rate of international reserve accumulation than was previously anticipated. In last year's report total foreign exchange reserves, both official and commercial, were projected to rise from \$11 billion to \$36 billion by 1985/86. In this report, reserves are projected to rise by only \$2.5 billion from their present level of \$11 billion during the same period. An expanded public external borrowing program is now projected to provide for a net inflow of \$8.5 billion during the first half of the decade, compared with the net inflow of only \$1.9 billion projected last year. Of the \$27 billion deterioration in the current account, therefore, roughly three quarters is expected to be accommodated through lower reserve levels, and one quarter by increased public borrowing. Nonetheless, the external reserve position is projected to remain comfortable at 3-4 months of imports throughout the decade and debt service obligations would remain within quite acceptable limits.

1.16 Despite the current downturn in oil production, longer term production prospects remain good and the major expansion in exploration activity, which has been underway for four years, shows every sign of continuing. Gross receipts from oil exports are projected to rise from \$15.4 billion in 1981/82 to \$25.3 billion in 1990/91. However, while oil earnings accounted for about 66% of total export receipts in 1981/82, their share would decline to only 42% by 1990/91. The relative importance of LNG is, however, expected to increase from 10% of total earnings now to almost 20% by 1990/91.

1.17 In the face of a deteriorating external balance, the Government has initiated a series of measures designed to promote non-oil exports. In January 1982, a wide-ranging set of policy changes were introduced in the fields of export finance, insurance, customs and port procedures. They are designed to increase the profitability of export activities and improve competitiveness, and over the longer run they are likely to have a substantial influence on trade patterns and industrial investment. They are important in that they partially compensate for the bias against exporting, inherent in a trade regime which has traditionally favored import substituting activities, and they establish the principle that all activities generating export value-added tax should be treated equally in receiving incentives. The Government is continuing to give export promotion a high priority and is currently exploring ways of improving marketing and quality control and increasing further the efficiency of ports and shipping services.

1.18 Prospects for non-oil exports are clouded by the current international economic recession, but there appear to be no overriding reasons to revise last year's projections beyond the next year or so. In the High case, non-oil exports are projected to recover in 1982/83 to the level that was achieved in 1980/81 (following the 30% drop in 1981/82). Thereafter they are projected to increase at an average rate of a little over 10% a year in real terms. While longer term non-oil export projections have not been revised (except for some changes in commodity price projections) this report does draw attention to uncertainties surrounding log, timber and fish exports in the near term. The export of manufactured goods has declined over the last two years, but this has been due to low international demand, protectionist measures in some industrial countries, and high domestic demand, rather than to a lack of competitiveness of Indonesian products. If Indonesia continues to move towards a more neutral system of trade incentives, there is reason to be optimistic about the continuation of the long term growth trend of manufactured exports of about 15% a year.

1.19 Import projections presented in last year's report have not been substantially revised. The trend of increasing import intensity of investment, which has occurred over the last decade is expected to continue until about 1984/85, when capital goods imports as a percentage of gross domestic investment are projected to reach about 42%. During this period, capital goods imports can be expected to grow in real terms by about 13-15% annually under the High case. The slower investment growth in the second half of the decade, coupled with a reduction in the import intensity of investment, is projected to cause capital goods import growth to slow to about 6% a year after 1985. Intermediate and consumer goods imports are projected to grow at an average annual rate of 7% and 6% respectively during the decade.

1.20 Under the High case the resource deficit is projected to rise to \$3.9 billion in 1982/83, to fall to \$1.4 billion in 1985/86, and thereafter to rise to \$5.0 billion in 1990/1991. The resource gap in 1985/86 and 1990/91 would be quite manageable at about 0.9% and 1.4% of projected GDP respectively.

1.21 Over the next four years current account deficits under the High case are projected to amount to about \$13 billion, equivalent to 2.7% of GDP. In the second half of the decade the deficits on current account are expected to continue at fairly high levels but to decline as a percentage of GDP - to an average of 2.2%. Indonesia will require capital inflows of some \$25 billion to cover the current account deficit (excluding interest payments) during the 1980s as a whole. Interest and amortization payments will add \$45 billion, and a further \$17 billion will be needed to ensure that reserves remain at 3-4 months of imports. Thus, total foreign exchange requirements to be financed through official grants, private direct investment, medium and long-term loans and other capital are projected to be about \$76 billion, of which \$23 billion will be needed during the next four years. In the light of Indonesia's strong external borrowing capacity and continued good medium-term growth prospects, the projected deficits are well within manageable limits.

1.22 Over the next four years it is estimated that net disbursements of public debt must be in the range of \$12.5 billion. Given the Government's debt repayment obligations, this will require gross disbursements of about \$19.5 billion. Of this amount, almost \$7 billion can be expected from loans already committed, leaving a requirement of \$12.5 billion from new borrowing. On the basis of anticipated disbursement schedules this is equivalent to new loan commitments of almost \$21 billion. Annual commitments would have to rise from \$4 billion in 1981/82 to about \$6.4 billion by 1985/86.

1.23 The decline in new commitments of official development assistance (ODA), consisting of bilateral concessional and multilateral loans, from \$2.3 billion in 1979 to \$1.4 billion in 1981 has been due almost entirely to a sharp reduction in concessional lending - from an all-time high of \$1.4 billion in 1979 to only \$488 million in 1981. The decline in the number and size of concessional loans signed in 1981 was partly due to delays in project preparation. The 1981 level of new loan commitments at highly concessional rates therefore tends to understate the current degree of support among donors for Indonesia's development programs. However, in view of the present political and economic climate in many of the donor countries and the pressing needs of low-income recipient countries, especially in Africa, it is unlikely that concessional flows to Indonesia will rise significantly in the coming years. For 1982/83 new commitments of ODA (from bilateral and multilateral sources) of \$1.85 billion are required. These are likely to rise slightly to about \$2.1 billion by 1985/86. As a

proportion of total loan commitments ODA would fall from almost half in 1979-81 to about one third in 1985/86. The importance of these additional inflows from official sources cannot be overemphasized. They will be essential if Indonesia is to finance the current account deficits now projected for the 1980s, while at the same time ensuring that the present very good maturity structure of its external debt is maintained. Moreover, official lending at these levels will ensure a continuation of the technical assistance and technology transfers embodied in these financial flows. The fact is that donors, through these inflows, have a vital role to play in assisting the Government in its efforts to implement the programs of structural change that are so essential for continued rapid growth of the country.

1.24 After taking account of disbursements from private direct investment, and increased use of short-term trade credits, the balance of the capital inflows will have to be met by borrowing in the commercial market. New loan commitments from these sources will have to be about \$11 billion during 1982/83 - 85/86, or almost \$3 billion a year on average. Significant growth is projected in borrowing from financial markets - in particular from (fixed rate) buyers credits and (variable rate) syndicated loans. Some funds would be raised through the bond market but the amounts would remain relatively small. In all, borrowing from financial markets (buyers' and suppliers' credits, syndicated loans and bonds) would increase from a current level of about \$2.3 billion to \$3.5 billion by 1985/86, and account for over half of all new commitments during this period.

1.25 New external borrowing at the projected levels would raise the amount of public and publicly guaranteed external debt disbursed and outstanding from \$15.7 billion at the end of 1981 to almost \$30 billion in 1985/86. As a proportion of the Government's development expenditure, disbursements of public external debt would continue to decline - from 50% in 1976/77 and 39% in 1981/82 to about 25% in the middle of the 1980s. The share of outstanding debt contracted on concessional terms, would fall from 50% at present to 31% by 1990/91. Debt service payments as a percentage of exports would rise from about 11% in 1980/81 to 18.5% by 1990/91. The years 1981/82 and 1982/83 are likely to show relatively high debt service ratios (15% and 18%, respectively) not so much because of a sudden increase in service payment but because of the slump in export earnings. On the whole the quality of Indonesia's external debt management continues to be good. The expectation expressed in this report that the country will be able to rely on increased commercial capital inflows in the years ahead to compensate for the slower growth in export earnings, is in part based on this judgment.

PART II. HUMAN RESOURCE DEVELOPMENT

1.26 While rapid economic development is necessary, it is not sufficient. Indonesia's development is still characterized by an imbalance between growth of the economy and the development of human resources. To redress this situation, the Government has embarked upon a massive expansion in its development programs in the fields of education and manpower development, health and nutrition, and improved water, sanitation and housing programs. If Indonesia is to maintain the current momentum of development, an integral part of which is improving access to education, health and other basic services, and if it is to lay the foundation for sustained growth in the longer term by improving the quality of its labor force, then the Government must plan to continue its ambitious programs in the field of human resource development.

Population, Labor Force and Employment

1.27 A preliminary analysis of the 1980 Population Census suggests the need for a number of revisions in demographic projections. The sharper than expected decline in mortality (particularly infant mortality) during the decade of the 1970s, together with the slower than expected decline in fertility, resulted in an average population growth rate of 2.3% a year during the decade, compared with the 2.0% a year which had been expected before the results of the Census became available. In 1980 the crude death rate was estimated at 12 per thousand and the crude birth rate at 35 per thousand. Under reasonably plausible assumptions about fertility and mortality rates, the population growth rate is projected to fall to 1.96% by 1990 and to 1.70% by the turn of the century. In the year 2000 the population is now projected to be 217 million. Under present trends, the population would cease to grow around the year 2085, at which time it would have reached 377 million.

1.28 As a result of changing age composition and rising labor force participation rates for women in most age groups, the labor force is projected to grow significantly faster during the next decade than the population as a whole, namely about 2.9% a year, adding nearly 20 million people to the labor force during the decade. An extrapolation of output/employment elasticities observed during the past decade for the various sectors of the economy suggests that even at a continued high GDP growth rate of 7.5% a year it will be very difficult to fully absorb all new entrants into the labor force in productive activities. In the absence of policies and investment programs that will increase the demand for labor per unit of incremental output, it is possible, therefore, that unemployment - either open or disguised - will increase.

1.29 On the basis of current trends the shares of agriculture, industry and services in projected total new employment created during the 1980s would be 11%, 25%, and 63%, respectively. These trends suggest a serious imbalance in employment growth between the industrial sector and the service sector. There is probably not much scope to increase employment growth in agriculture beyond current trends except perhaps through accelerated programs for tree crops, sugar development, horticulture and animal husbandry. Staple food production is not thought to offer major potential for employment growth, as the decline in labor use due to increased mechanization, particularly in rice, tends to offset the increase in the demand for labor due to output growth. The report suggests that there is considerable scope for increasing the rate of labor absorption in manufacturing through the implementation of policy reforms discussed in detail in last year's economic report. But, even if the share of industry in total employment growth increases, the tertiary sector, including, for example, education and health services, agricultural extension, and maintenance of rural water supply systems, will undoubtedly continue to be the principal source of employment growth in absolute terms. If well directed, tertiary sector employment can, at the same time, be an important source of future productivity growth in other sectors of the economy. The report stresses the continued need for a specific employment orientation in Government policies and programs. In this respect the significant employment effects of the Government's INPRES programs are highlighted and a suggestion is made to begin to use variable regional allocations for INPRES programs as an instrument to compensate for variations in regional income and employment growth due, for example, to external demand factors.

Education and Manpower Development

1.30 In the past decade Indonesia has made significant gains in expanding access to education and in improving the skills of the labor force. With the exception of some sparsely populated and isolated areas, the Government's objective of universal enrollment in primary education has virtually been realized. Some 25 million children now have access to primary education. The rate of expansion in secondary education has been equally impressive. Some 35% of the relevant age group now attend junior secondary school and 22% attend senior secondary schools. At the tertiary level, despite an impressive 15% annual expansion, total enrollment (only half a million in 1981 - no more than 4% of the relevant age group) is still very modest. This progress notwithstanding, there is little doubt that the relatively weak educational base of the population is among the main obstacles to continued rapid economic development in the 1980s. Substantially larger investments to overcome these problems will be needed throughout the 1980s. But in preparing for REPELITA IV, the Government faces a number of crucial questions concerning policy and investment strategy for the sector. Among the more pressing questions are: the choice

of an appropriate rate of expansion of secondary and tertiary school enrollment; how to improve the quality of education in both public and private schools; and how to reconcile the apparent contradiction between the observed high unemployment among secondary and tertiary school leavers in urban areas and the overall shortage of skilled manpower in the economy.

1.31 This report takes the view that the trend towards substantially larger budget allocations which was evident in the President's 1982/83 budget message will have to be maintained, at least through most of the 1980s, if there is to be a significant improvement in access to education at higher levels and if progress is to be made towards quality upgrading. The priorities therefore are:

- (a) to improve the quality of primary education now that there is near universal access to schooling at this level;
- (b) to bring about a major expansion in the quantity of both junior and senior secondary education, particularly in rural areas and to begin to improve its quality through the upgrading and more rapid expansion of teacher training colleges; and
- (c) to expand opportunities for tertiary education in a substantial but selective fashion through a more systematic assessment of Indonesia's future professional manpower needs.

1.32 At nearly all levels of education in Indonesia, repeater and drop-out rates are unacceptably high, and the need for quality improvement is pressing. However, the objectives of a massive further expansion of enrollment at the secondary and tertiary level, and of quality improvement perhaps cannot always be achieved simultaneously. The inadequate supply of qualified and experienced teachers is the principal obstacle. At this juncture in Indonesia's educational development, the conflict between quantitative and qualitative objectives is especially acute with regard to the expansion of general junior and senior secondary education, and in tertiary education. Notwithstanding the need to strengthen the entire education system, this report takes the position that, with regard to general secondary education, priority ought to be given to the creation of access to educational facilities, even, if necessary, at the expense of quality improvements for the time being. To prevent a decline in the quality of candidates for teacher training colleges, the report suggests a sizeable relative improvement in the conditions of employment for teachers.

1.33 In view of Indonesia's great need for professional and skilled manpower, it would be reasonable to plan for continued growth in enrollments at the tertiary level of 15% a year to achieve a total enrollment of about 2 million, or about 12% of the age cohort, by 1990. To overcome the

problems of low productivity and poor quality that characterize parts of the university system today further reforms are needed to reduce the length of study programs, increase their practical orientation, and improve student and teacher motivation (for example through credit systems, minimum standards for teacher workloads, improved teacher remuneration, and better libraries). Significant improvements in efficiency are possible through reductions in the unacceptably high failure and drop-out rates. If the ratio of graduating students to total enrollment were increased from 5% to an average of say, 12-15%, a threefold increase in output could be obtained in science, engineering, agriculture and economics without increasing enrollments.

1.34 Although enrollments in senior secondary level vocational schools already account for 30% of all senior secondary enrollments (or 475,000 students), there is also a clear need to expand vocational training, including special training programs for out-of-school youths. Many vocational schools and training programs have difficulty in recruiting teachers with industrial or commercial experience and many of the graduates prefer to continue their studies rather than directly seek employment. The effectiveness of vocational schools and special training programs could be increased through the active participation of employers and trade unions in the Government's training programs. The lack of a formal linkage with prospective employers is one factor affecting the relatively low placement of program graduates in employment.

1.35 Despite the need for expansion of enrollment rates, signals from Indonesian labor force surveys paradoxically suggest that many secondary school leavers and university graduates are already experiencing considerable difficulty in finding suitable employment, especially in the cities. Rates of unemployment tend to be higher than for those with only primary education, apparently because it takes longer for those with higher education to find their first job. This emerging school leaver problem is indicative more of the process of job-search (that is, imperfections in the labor market) than of the long term demand for educated manpower. The efficiency of the labor market in bringing supply and demand together could be improved, for example, through the introduction of career counselling at schools and job information centers.

1.36 Private schools play a very important role in the provision of education in Indonesia and the Government has encouraged this development. They account for almost half of total enrollments at the secondary and tertiary levels and are growing more rapidly than public schools. The strength of private education is an important asset and, given probable Government budget constraints, it is essential that the current favorable environment for its expansion should be enhanced. Given the large unsatisfied demand for secondary and tertiary education and the limited capacity of

the Ministry of Education to assess, monitor and supervise the maintenance of quality in private educational institutions, the quality variation between them is extremely large. A national effort aimed at quality upgrading of the entire education system has to pay special attention to the registration and certification of private schools. The system of external examiners could be expanded to ensure greater objectivity and standardization in the grading of students.

1.37 To implement the proposed education sector development program, after allowing for a continued significant role for private schools, public expenditures on education would have to grow at about 12% a year in real terms throughout the 1980s. This would imply public education spending equivalent to 5.6% of GDP by 1990. When in-service training programs financed by other Government departments are added, the total would approach 6% of GDP. It would appear from the analysis in Part I of the report that such a program, while ambitious, would be feasible. As a proportion of total government spending, education would rise from 20% in 1980/81 to 23% in 1990/91. After enrollment targets have been achieved at the secondary level, development expenditures on education would slow down, and the proportion spent on education in the 1990s would probably decline again.

Health and nutrition

1.38 Health and nutrition standards have steadily improved during the past decade. Many factors have contributed to these improvements, including the Government's massive program for the establishment and staffing of 5,000 district level health centers (PUSKESMAS), 10,400 subdistrict health centers, 1,200 hospitals, mother and child care programs, improved education generally, sensible agricultural pricing policies, rapid expansion of food production, improved distribution and storage of rice, and the success of family planning programs.

1.39 Though the infant mortality rate is still high by international standards, the decline over the past ten years (from 140 in 1969 to 105 in 1978) has been particularly noteworthy. One of the more pressing problems in health care is the unequal regional distribution of both private and public services, but improvements are being made, inter alia, by offering medical personnel incentives to accept assignments in rural districts and remote areas. In spite of the progress, health conditions in Indonesia are still relatively poor by international standards, particularly in low income, high density areas of big cities where standards of hygiene are often appalling for lack of basic sanitary facilities and clean water. Cholera, typhoid and dysentery remain important causes of morbidity and mortality in certain parts of Indonesia and are believed to be endemic in some. In remote rural areas, the shortage of trained medical personnel, inadequate nutrition, and poor availability of drugs are primary causes of low health standards.

1.40 One of the basic questions concerning the future direction of health services development is similar to that in education, namely whether priority should be given to further service expansion or to improvements in quality and utilization. On the one hand, despite rapid expansion, the quantity of facilities remains low by international standards. For example, the ratio of doctors to population (5.5 per 100,000) is less than half that in Thailand and about one-fifth of that in the Philippines, India, Pakistan and Sri Lanka. On the other hand, existing facilities are often underutilized and management capacity in the sector is stretched to the point that it has now become a major constraint to future progress. The report suggests that in the formulation of health service policies and the allocation of budget funds, greater priority should be given to endemic and epidemic disease control, drug production and distribution, immunization programs, health manpower development, and maintenance of existing health care facilities. At the same time it stresses the need to simplify the existing system of health sector budgeting which is very complex and thus places unnecessary burdens on health care administrators.

1.41 The recommended expansion in budgetary allocations to the sector would also finance the continued construction of 200 new district health centers and 2,000 subcenters annually for the next three or four years. During the decade, 160 additional kabupaten hospitals could be constructed or rehabilitated and 3 regional hospitals could be built. While the rate of growth of capital investment in the health sector may be expected to fall in the second part of the decade, it will be necessary for recurrent expenditures to continue to grow rapidly throughout the decade.

1.42 With regard to nutrition, the main conclusion is that the Government's current programs and policies are successful in achieving progress and should be continued with vigor. Average per capita calorie availability appears to have increased from 2,097 in 1970 to about 2,500 in 1980. Apparent per capita consumption of staple foods increased from 160 kg of rice equivalents in 1970 to 186 kg in 1980. Notwithstanding these important improvements, protein energy malnutrition (PEM) remains a serious problem in Indonesia, affecting an estimated 15% of the population. As the remaining PEM problem is primarily an income problem, its solution has to be sought in raising the income earning capacity of the affected groups through increased productivity or employment, and education. In this regard the report stresses the important contributions that cooperatives can make, in helping small farmers to increase their productivity. They can provide seeds, fertilizer, pesticides, credit, and advice to members working on very small plots or similar inputs for small-scale livestock. For rice this has begun in the INSUS intensification scheme. Village level cooperatives could also play a more effective role in the provision of community storage facilities for crops to increase security of food supplies throughout the year and in case of a poor harvest. However, an expanded role for cooperatives would have to be matched by further improvements in their management and efficiency.

1.43 Another kind of nutritional problem in Indonesia is due to trace element deficiencies in the diet of many people. Of particular importance are the problems caused by vitamin A deficiency, and by iodine and iron deficiency. Generally, the answer to these problems does not, in the first place, lie in employment and income growth, but rather in nutritional education and in specific government interventions to supplement diets with the missing elements, for example, through the reinforcement of widely consumed staple foods and salt iodization. Most of the common trace element deficiencies are by now well documented in Indonesia and programs to deal with these problems are being formulated or implemented.

Housing, Water Supply and Sanitation

1.44 Of the total investment in housing in Indonesia, currently about 10% is either constructed by, or financed through, the public sector. The national urban housing corporation PERUMNAS has significantly expanded its capacity to construct low cost housing and to prepare sites and service schemes. Rural housing is generally considered to be a private sector responsibility. Most investment is undertaken personally by the owner/occupant and financing, if needed, is usually arranged outside the formal banking system. In recent years actual construction by PERUMNAS has exceeded plan targets; the capacity of the State Savings Bank (BTN) to provide Government sponsored mortgage financing for both public and private low cost housing and serviced sites has grown commensurately. Yet, demand for both low and medium cost housing far exceeds supply and the proportion of GDP spent on housing (estimated at 3%) is generally considered lower than desirable. Unsatisfied demand for new or improved housing due to inadequate supply is believed to be strongest among the lower income groups in the urban areas. Most beneficiaries of Government sponsored housing appear to belong to the middle and upper middle income groups. The quality of government housing is uneven and in many cases it is lower than minimum design standards due to inadequate supervision of contractors.

1.45 An intractable constraint to the rapid expansion of low cost housing construction in and around the major cities, whether public or private, is the problem of land acquisition. Land prices in urban and suburban areas are rising very fast and it is becoming increasingly difficult to site low cost housing schemes where they are most needed, that is, in or near the big cities. An estimated 200,000 new medium and low cost housing units need to be constructed annually if basic urban housing needs are to be met by the year 2000. The capacity of PERUMNAS is around 40,000 units a year, while BTN has an annual Government sponsored mortgage financing target of 30,000 units. These numbers underline the fact that most new housing construction has to be organized by the private sector. But since BTN is at present the only mortgage bank in Indonesia providing financing for low cost housing, there is an urgent need to increase

financial intermediation facilities for that purpose, including financing for construction companies to enable private developers to increase the supply of badly needed housing.

1.46 Given the likelihood that overall budgetary resources will rise less rapidly than in recent years, it is not realistic to expect the proportion of Government spending allocated to housing (about 2% of the 1982/83 development budget) to increase much. The report suggests several ways to increase the effectiveness of existing allocations. The first is to increase the share of sites and service schemes in PERUMNAS construction activities in order to capitalize on the relative abundance of private labor and skills available for house construction by owners/occupiers. The second is to improve cost recovery through higher mortgage rates. Present lending rates, though different for different qualities of housing, are low and usually negative in real terms. Higher rates would not only improve cost recovery and thus add to the resources available for new housing financing, but would also increase the commercial viability of mortgage financing and help the relevant financial institutions to raise new funds commercially, thus reducing dependence on public sector resources for private housing development.

1.47 The needs for increased and improved water supply and sanitation in Indonesia are immense. In cities, the expansion of water distribution systems is often combined with so-called Kampung Improvement Projects (KIP) which also provide other basic minimum facilities such as footpaths, drainage, toilets, and solid waste facilities. Although there have been complaints about poor quality construction, the general consensus is that the KIP program has been extremely successful. Beginning in Jakarta on a small scale during Repelita I, it had been expanded by the third year of Repelita III (1981/82) to fifty-five cities. By the end of 1981, all high and medium density kampungs in Jakarta had been improved, and a target to improve all kampungs in the ten major cities within 12 years has been set. This program provides a good illustration of the Government's policy to give preference to broad coverage of social programs, even at the expense of lower standards, over the more selective approaches found in many developing countries, which tend to benefit a narrow elite only.

1.48 In 1981 an estimated 10% of the rural population had easy access to safe water compared to 40% in the cities. It is the Government's plan to significantly accelerate its water supply programs and the targets are to supply 60% of the rural population and 75% of the urban population with clean water by 1990. If the Government's rural and small town programs are to be successful, it will be necessary to delegate authority for design and implementation to the lowest possible level. One urgent need is for the training of small local construction firms in the technology of small water systems. In many instances, it may be possible for the Government to simply

provide the required capital equipment (if necessary at subsidized prices) to the construction companies, who are then responsible for liaising with local leaders concerning its installation.

1.49 Experience from other countries suggests that if the schemes are sufficiently simple and the costs consequently low, there will be no difficulty in finding sufficient effective demand for water provided, with the local community bearing the bulk of the entire cost, after the subsidization of equipment. Beneficiaries are generally willing and able to pay about 3-5% of their incomes for water and sanitation - a figure which appears to be remarkably constant throughout the developing world. Given the current levels of income in urban and rural areas of Indonesia and the technical standards of the proposed systems, this percentage will, on average, be sufficient to cover all operating costs and part of the investment cost. Some of the services may appropriately be subsidized on social grounds because these services have benefits, in the form of a cleaner, healthier environment, that accrue to the entire population and not just those who are directly consuming the services.

1.50 To reach water supply and sanitation targets set for 1990, the report suggests the need for a 40% a year real increase in development budget allocations for these programs through 1985/86 and a more modest 5% a year real increase thereafter. This means that the proportion of the central government's development budget devoted to water and sanitation (only 1% in 1981/82) has to be increased substantially and also that the contributions from local governments and beneficiaries have to be raised.

PART I: ADJUSTMENT AND GROWTH IN THE EIGHTIES

2. RECENT ECONOMIC DEVELOPMENTS

2.01 For Indonesia, 1981 was a mixed year. On the negative side, the balance of payments worsened dramatically due principally to a prolonged world recession and to a glut of oil on international markets; and the remarkable growth of GDP in 1980 was not repeated. On the positive side, the rice crop was excellent, the inflation rate fell from 17% to 7%, and real GDP growth (provisionally estimated at 7.8%), although lower than in the previous year, was still high by international standards. Overall, Indonesia showed that its internal economy is now relatively robust in the face of a world recession. The Government acted swiftly in the face of a deteriorating resource position with innovative measures to promote non-oil exports and an imaginative 1982/83 budget, prompting some observers to believe that the woes of 1981 were in fact a "blessing in disguise."

Production and Income

2.02 The 9.6% growth of GDP recorded by Indonesia in 1980 was among the highest in the world. On the demand side, it was fueled by a plentiful public resource position (real Government consumption rose by 24%), high growth in investment in both the public and private sectors (gross domestic investment rose by 17.7%) and strong private consumption growth (9.3%) brought about by higher agricultural incomes, large gains in export earnings the previous year, and by increased private purchasing power from various Government programs. Once again the terms of trade moved in Indonesia's favor, so that Gross Domestic Income grew by an extraordinary 15.8%.

2.03 No national accounts data are as yet available for 1981, and the estimates presented in Table 2.1 are therefore tentative. Government consumption expenditure was an important stimulus to the economy, growing in real terms by about 15%. Private consumption grew less rapidly but remained buoyant in some regions, particularly in the main rice-growing areas and where Government expenditures generated local employment. In traditional export producing areas, demand was depressed, and real incomes probably fell in parts of Sumatra and Kalimantan. Gross investment grew at a rate of about 12%. Private sector investment, as usual, did not keep pace with that in the public sector, although credit facilities were extended generously, particularly to small scale enterprises.

2.04 Once again the rice sector played a major stimulating role, with a harvest of over 22 million tons, up almost 10% over 1980. The construction sector, and output of public services also provided a continuing impetus. But manufacturing output grew below its average rate and other agricultural

output, mainly due to a decline in the forestry sector, appeared to stagnate. Above all, the external sector was unhelpful in 1981 with exports falling in real terms by about 5%, while imports rose by 14%. However, partly due to fortuitous circumstances, but mainly to good economic management, the economy as a whole was relatively shielded from external developments.

Table 2.1: GROWTH OF GROSS DOMESTIC PRODUCT AT 1973 MARKET PRICES
(Percent per annum)

	1979	1980	1981/a	1971-80/b	Percent of total 1980
Agriculture	4.0	5.5	3.5	3.7	31.4
Farm food crops	4.0	9.7	7.5	3.9	19.1
Estate crops	10.0	0.0	3.3	5.1	6.0
Others (including forestry)	2.8	0.0	-7.5	2.9	6.3
Mining and quarrying	-0.2	-1.2	2.0	6.7	9.5
Manufacturing	10.1	21.2	10.0	13.1	14.3
Construction, elec- tricity, gas and water	7.8	11.7	15.0	14.8	6.4
Services	6.2	12.0	11.0	9.1	38.4
Gross Domestic Product	5.3	9.6	7.8	7.5	100.0

/a Provisional Bank staff estimate.

/b Estimated by log-linear regression.

Source: Biro Pusat Statistik (excluding 1981 estimates).

External Factors

2.05 International factors could hardly have been less favorable for Indonesia over the last year. The international oil market was stagnant,

average prices of non-oil exports fell substantially,^{/1} and industrialized countries continued to take refuge behind protective barriers. By the middle of 1981/82 the situation was particularly gloomy for non-oil exports. Between October 1980 and October 1981 prices of virtually all traditional exports fell substantially: rubber by 35%; coffee, 25%; tea, 15%; palm oil, 5%; white pepper, 23%; lumber, 6%; and plywood, 19%.^{/2} Production of primary commodities responded to reduced incentives. For example in 1981 as a whole, rubber and coffee export volumes were, respectively, 8% and 6% lower than in 1980. In the last quarter of 1981 most prices stabilized and some (such as coffee, tea and timber) recovered slightly, a trend which continued into the first quarter of 1982. Some commodities faced special circumstances during 1981. In response to new Government regulations (para 4.07), log exports in April-December 1981 were 45% lower than in the same period the previous year ^{/3}. Similarly, the Government's policy of ensuring adequate supplies and low prices for the domestic palm oil market resulted in a 50% volume reduction in palm oil exports over the same period. Finally, Indonesia's International Coffee Organization export quota was lowered by 28% in August 1981. This is likely to affect exports for some years to come and is particularly worrisome since output is still growing and since the bulk of coffee production in Indonesia is accounted for by smallholders. A detailed presentation of trends in export prices and volumes is presented in Annex I.

2.06 Non-oil imports rose at a record rate (over 20% in real terms) in 1981/82, due to a combination of major increases of capital goods imports for public sector investments, and to high growth in private consumer imports, which in turn stemmed from rapid private credit expansion and low import prices. Between October 1980 and October 1981 import prices ^{/4} in terms of rupiah fell about 4%, due to the effective appreciation of the rupiah, in line with the dollar, vis-a-vis trading partners.

^{/1} Average prices of nonoil exports rose by 40% in 1979/80 (over 1978/79 levels) and by 2% in 1980/81 but fell by about 6% in 1981/82.

^{/2} Of all of Indonesia's major exports only tin rose in price (by 18% between September 1980 and September 1981), but has since fallen by the same amount.

^{/3} Plywood exports were up however, by 50% (from a very low base) as were sawnwood exports, by 10%, during the same period.

^{/4} Weighted export unit prices (converted into rupiah) of seven industrial countries with Indonesia's import shares as weights.

2.07 Table 2.2 summarizes the way in which these factors have combined to dramatically change the balance of payments picture. The current account worsened by almost \$5 billion in 1981/82, and net official reserves fell during the fiscal year for the first time since 1975/76. Chapter 4 presents a more detailed analysis of these developments, and assesses the extent to which this deterioration is transitory and to what extent it reflects a more permanent trend.

2.08 In response to weak international demand for oil, OPEC agreed in March 1982 to cut back production in order to prevent oil prices from falling. Indonesia agreed to cut oil production from a planned 1.64 million barrels per day (mbd) to 1.3 mbd. If, as seems reasonable, the market for oil strengthens in about the third quarter of 1982, Indonesia's production could quickly rise to over 1.6 mbd. If the average production for 1982/83 is therefore 1.45 mbd, and if Indonesia's oil export price does not fall, the estimated effect will be to reduce budget revenues by about Rp.1.1 trillion from budgeted levels, and to cause the current account of the balance of payments to deteriorate by about \$2 billion from what it would otherwise have been.

2.09 Export Promotion Measures. In the face of deteriorating external balance, the Government initiated a series of measures designed to promote exports. In the latter part of 1981, export taxes were either removed or substantially reduced for a number of commodities including rubber, tea coffee, pepper and sawnwood. In January 1982, a new wide-ranging set of policies was introduced to encourage exports. Seventeen new decrees, regulations and circulars were issued at that time with the purpose of raising the profitability of export activities and improving competitiveness. They covered five broad areas: (a) the system of payments permitted for Indonesia's exports was broadened and simplified; (b) export credit facilities were expanded and interest rates on export credits lowered to 6% or 9%, depending on the commodities involved; (c) a system of export credit guarantees and export insurance was instituted; (d) a number of export and import procedures and regulations were improved; and (e) certain fees for the use of port and harbor facilities by exporters were reduced.^{/1} In the course of time these new policies are likely to have a substantial influence on trade patterns and industrial investment. They are important in that they partially compensate for the bias against exporting inherent in the existing trade regime which has traditionally favored import substituting activities, and they establish the principle that all activities generating export value-added should be treated equally in receiving incentives (para. 4.05).

^{/1} In addition, the regulations covered export taxes and import duties.

Table 2.2: BALANCE OF PAYMENTS
(US\$ billions)

	1979/80	1980/81	1981/82 (estimate)
<u>Merchandise Exports</u>	<u>17.49</u>	<u>22.25</u>	<u>21.87</u>
Oil and LNG (gross)	11.32	16.66	17.59
Non-oil	6.17	5.58	4.28
<u>Merchandise Imports</u>	<u>-13.38</u>	<u>-17.67</u>	<u>-22.17</u>
Oil sector	-4.35	-5.88	-7.66
Non-oil	-9.03	-11.79	-14.51
Nonfactor services (net)	-0.66	-0.98	-1.03
Resource balance	<u>3.46</u>	<u>3.60</u>	<u>-1.33</u>
Factor services (net)	-1.26	-1.21	-1.20
Official transfers	0.05	0.08	0.07
Current account balance	<u>2.20</u>	<u>2.47</u>	<u>-2.46</u>
Direct foreign investment (net)	0.22	0.14	0.18
Public medium & long-term loans (net)	0.60	1.88	2.71
Other capital (net)	-1.33	-1.75	-1.26
Deposit money banks	-1.87	-1.12	-0.85
Other	0.54	-0.63	-0.41
Change in official reserves (- denotes increase)	-1.69	-2.74	0.84
<u>Memorandum Items:</u>			
Net official reserves	4.61	7.34	6.50
Net foreign assets of deposit money banks (DMBs)	2.33	3.45	4.30

Source: Bank Indonesia (1979/80-1980/81) and Bank Staff Estimates (1981/82).
See Annex 1, tables 1-3.

2.10 An additional, more controversial, trade regulation was introduced by the Government at the same time; this linked large Government contracts for civil works or imports to commitments on the part of the foreign contractor or supplier to purchase (or arrange the purchase of) an equivalent value of Indonesian exports - the so-called "counter-purchase" policy. It is too early to assess the effect of this policy on exports. Issues surrounding the policy center on whether it would result in a diversion of exports from traditional channels and higher tender prices. Experience from other countries suggests that foreign suppliers may add premiums to compensate for the risks and costs of finding buyers for Indonesia's goods. The Government is aware of these risks and is attempting to minimize their impact.

The 1982/83 Budget

2.11 Recognizing the importance of maintaining the momentum of development expenditures, and faced with stagnant receipts from the oil sector, the Government made two important policy decisions in preparation for the 1982/83 budget year; domestic oil prices were increased by between 60-67%, and the Ministry of Finance embarked on a major program to raise non-oil revenue.

2.12 The increase in domestic oil prices was across-the-board for all oil products, with price relativities being roughly maintained. Table 2.3 summarizes the price changes and their effects on subsidies. The effect on Government finances is dramatic. The 1982/83 subsidy is budgeted at Rp 0.9 trillion, compared with Rp.1.5 trillion in 1981/82, and about Rp 2.0 trillion in 1982/83 if there had been no price increase. The most significant efforts to raise nonoil revenues will be from corporate income tax (up 47%), sales tax (up 50%), and IPEDA land tax (up 24%). On the other hand, export duties are budgeted to decline sharply, in accordance with the export-promotion policy. The implications of these important measures for the overall financing picture, and the medium term outlook for public resource mobilization are discussed in Chapter 3 of this report.

2.13 These measures permitted another large increase in the development budget in 1982/83, with the largest percentage increases for education (66%) and for housing and water (80%). Programs in these sectors are discussed in Chapter 6. Table 2.4 summarizes recent budgetary developments.

Inflation

2.14 In the twelve months ending December 1981, average consumer prices in urban areas rose by only 7.3%, down from 17% a year earlier. Table 2.5 summarizes changes in the various components. Four principal factors contributed to this impressive decline. First, the effective appreciation of the rupiah, combined with relatively low rates of international

Table 2.3: DOMESTIC OIL PRICES AND SUBSIDIES

Product	Market share 1980 (%)	Price level (Rp/ltr)		Inter- national price /a	Domestic price as pro- portion of international price /b	
		Dec.	Jan.		Dec.	Jan.
		1981	1982		1981	1982
Aviation turbo/gas	3.2	150	240	195	0.77	1.23
Premium gasoline	0.3	220	360	202	1.09	1.78
Regular gasoline	16.5	150	240	189	0.79	1.27
Kerosene	34.8	37.5	60	203	0.18	0.30
Motor diesel	28.5	52.5	85	185	0.28	0.46
Industrial diesel	5.6	45	75	185	0.24	0.41
Fuel oil	11.2	45	75	146	0.31	0.51
<u>Total/Average</u>	<u>100</u>	<u>66</u>	<u>106</u>	<u>188</u>	<u>0.35</u>	<u>0.56</u>

/a Based on 1981 Singapore ex-refinery prices, increased by 5% to allow for distribution costs.

/b A fraction higher than unity indicates a tax. A fraction lower than unity indicates an economic subsidy.

Sources: Department of Mines and Energy and Bank staff estimates.

Table 2.4: CENTRAL GOVERNMENT BUDGET
(Rp billions)

	1980/81 Actual	1981/82 Budget	Real increase /a (%)	1982/83 Budget	Real increase /a (%)
<u>Revenues</u>					
Oil and LNG	7,020	8,575	11.0	9,122	-5.0
Non-oil revenues	3,207	3,699	4.8	4,634	11.9
Income taxes	1,210	1,463	9.9	1,991	21.5
Taxes on domestic production	733	875	8.5	1,104	12.7
Taxes on international trade	948	1,142	9.5	1,147	-10.3
Nontax revenues	316	219	-37.0	392	59.8
Program and project aid	1,444	1,626	-1.1	1,851	1.6
<u>Total Revenues</u>	<u>11,721</u>	<u>13,900</u>	7.8	<u>15,607</u>	0.3
<u>Expenditures</u>					
Routine	<u>5,800</u>	<u>7,501</u>	17.6	<u>7,002</u>	-16.6
<u>Development</u>					
Agriculture and irrigation (including fertilizer subsidy)	929	942	-7.8	1,253	18.8
Industry and mining	501	522	-5.3	699	19.6
Electric power	421	492	6.2	606	10.0
Transport and tourism	780	810	-5.6	1,098	21.0
Manpower and transmigration	325	436	22.0	606	24.1
Regional development	482	613	15.6	741	7.9
Education	575	787	24.4	1,302	47.7
Health	218	259	8.0	322	11.0
Housing and water	191	156	-25.7	281	60.8
General public services	700	738	-4.2	871	5.4
Government capital participation	389	201	-53.0	265	17.7
Others	405	445	-0.1	563	13.0
<u>Total Development</u>	<u>5,916</u>	<u>6,399</u>	-1.7	<u>8,606</u>	20.1
<u>Total Expenditures</u>	<u>11,716</u>	<u>13,900</u>		<u>15,607</u>	

/a Assumes 10% inflation in 1981/82 and 12% in 1982/83.

Sources: Ministry of Finance and Bank staff estimates.

Table 2.5: COMPONENTS OF INFLATION - CONSUMER
PRICE INDEX: AVERAGE 17 CITIES
(Percent increase in 12 months ending December)

	Food	Housing	Clothing	Miscellaneous	General
1978	7.2	9.4	19.9	11.2	9.9
1979	27.7	27.2	39.4	22.6	27.8
1980	17.4	19.7	13.4	15.5	17.1
1981	8.2	8.1	3.9	6.1	7.3

Source: Central Statistical Office (BPS).

inflation, resulted in declining import prices for much of the period. The average fall in import prices of 4% (para 2.06) between September 1980 and September 1981 compared with a rise of 13% a year earlier. The strong international influence on Indonesia's urban inflation is illustrated by the behavior of the more "tradable" products such as clothing (Table 2.5). Second, the bumper rice harvests ensured that food prices remained stable throughout the year. This factor was particularly important in the last quarter of 1981, when storage facilities became inundated with surplus grain. General consumer prices actually fell in two months during that period. Third, falling export prices of traditional commodities such as fats and oils also depressed their domestic prices. In addition, lower incomes of primary producers in some parts of the country contributed to a general slackening of demand. Finally, a key factor influencing the inflation rate was the steady decline in the overall growth of the money supply - from 48% in 1980 to 24% in 1981 ^{/1} due exclusively to the deteriorating foreign exchange position.

2.15 The low inflation rate of 1981 will not be repeated in 1982. The increased domestic prices of oil products caused the consumer price index to rise by almost 5% in January. By the end of April, consumer prices had already risen by almost the 12-month increase of 1981. The value of the rupiah remains high when measured in terms of a trade-weighted basket of

^{/1} These figures refer to "narrow money," consisting of notes and coins and demand deposits. Total liquidity, which had risen by 63% in 1980, rose by 31% in 1981. The main component of the growth in money supply in 1981 was credit expansion to the private sector.

currencies./¹ If its value were to return to its early 1981 level, this would add a further inflationary influence. However, the "underlying" rate of inflation remains low, expansion of the money supply remains well under control and there are reasons to expect another good rice harvest this year. In the light of these factors, an inflation rate of about 12% for 1982 appears likely.

¹ In the 12 months up to March 1982 the rupiah appreciated against the Japanese Yen (10%), the French franc (17%), the Dutch Guilder (9%) the Deutschemark (7%), the Australian Dollar (4%) and the Pound Sterling (17%), and depreciated against the US Dollar (4%), and the Singapore Dollar (3%).

3. DOMESTIC RESOURCE MANAGEMENT POLICIES

3.01 Indonesia's development over the last decade has been characterized by a high rate of economic growth associated with rapid increases in public expenditures, overall investment and domestic savings. This was facilitated by the substantial inflow of oil earnings, for which the major conduit was the Government budget. These revenues directly financed the major increase in public investment in both economic and social infrastructure, while allowing the private sector to enjoy a low tax effort by international standards, and a sustained buoyant demand for domestic products (Table 3.1).

Table 3.1: INDICATORS OF DEVELOPMENT RESOURCES
(% of GDP at current prices)

	1972	1976	1980
Gross domestic savings	16.4	22.1	30.0
Gross domestic investment	18.8	20.7	21.7
Central government domestic revenues <u>/a</u>	12.8	18.6	23.4
Central government expenditures <u>/b</u>	16.1	23.6	26.8
Non-oil taxes	8.1	7.6	6.6
Net oil export earnings	3.6	10.0	15.1

/a Includes oil taxes, as defined in the budget.

/b Includes subsidies, as given in the budget.

Source: Central Statistical Office (BPS).

3.02 The purpose of this chapter is first to review the investment strategy judged necessary to maintain a rapid rate of development and employment creation and then to explore the possibilities of financing such a program. The thesis of this section of the report is that continued high investment is both desirable and feasible. It will however require further movement towards the adoption of a structural adjustment program, and in particular a major initiative in domestic and foreign exchange resource mobilization. As the subsequent analysis indicates, important steps in this regard are already being undertaken by the Government.

Review of the Macro-Economic Framework

3.03 In last year's economic report two sets of projections were presented - the High and Low cases. The latter projected ongoing trends in the economy without allowing for policy adjustments, and depicted a rapidly deteriorating resource position requiring investment cut backs and slower growth. The former described a policy package designed to achieve a smooth adjustment in the structure of the economy away from an excessive dependence on the oil sector, without sacrificing economic growth. Four broad policy adjustments were identified as critical to this transformation: (a) the gradual movement away from an incentive system biased toward import substitution industries and towards a more neutral trade regime; (b) a simplification of the investment and regulatory environment; (c) an improvement in the efficiency of financial intermediation and domestic resource mobilization; and (d) the adjustment of domestic prices to reflect economic costs. The re-emergence of a balance of payments deficit as a result of the present depressed prices for primary commodities and for oil has not altered the need for structural adjustment along these lines. If anything, events of the past twelve months have underscored the urgency of adjustment. The projections prepared for the present report again distinguish between a High and a Low case. The High case incorporates all of the elements of this structural adjustment package. Of course, Indonesia's development remains highly sensitive to international oil price developments - although it will become somewhat less so as the structure of the economy changes during the decade - and for this reason the chapter includes a section which examines the impact of oil prices lower than those assumed in the High and Low policy cases.

3.04 The Government has a considerable influence over overall economic growth through the level and composition of the public investment program, and the incentive framework provided for private investment and production. In the analysis of the High case, a feasible growth pattern has been sought that is consistent with the following constraints:

- (a) Public Sector Resource Balance. The traditional focus of this has been the Indonesian Government's requirement of a balance between budgetary expenditures and receipts in each successive fiscal year. In the projections it is assumed that the budget will continue to have a de jure balance, although over the next few years there is scope for some de facto financing from the accumulated underexpenditures of previous years. In the discussion of the investment strategy the focus is on the whole public investment program, including public enterprise investment, some of which may be financed outside the development budget. Sources of finance therefore include taxes, foreign borrowing, domestic borrowing, and "self-financing" of the public enterprises.

- (b) Public/Private Sector Balance. It is important that the expanded public expenditure program should not be financed in such a way that it negatively affects private sector activity. First, it is essential that credit remains adequate for the private sector. Second, in raising the domestic tax effort, due consideration must be given to avoiding a reduction in private incomes and consumption, particularly among low-income households; and
- (c) External Balance. Although no hard and fast rules for balance of payment stability can be given, it is assumed that the debt service ratio ^{/1} should remain within prudent limits (not exceeding 20%), and that official foreign exchange reserves should not be run down below prudent levels (the equivalent of about three or four months of imports).

3.05 After taking account of these constraints, and the actual development over the past year in the international economic environment, the projections for the High and Low policy cases have been revised. A summary of the results for the High case are set out in Table 3.2. The analysis suggests that GDP, which grew at an average rate of 7% to 8% a year during the 1970s, can reasonably be expected to continue to grow at this rate during the 1980s, provided early action is taken on the policy measures outlined earlier and discussed in greater detail in the 1981 economic report.

Investment Strategy for the Eighties

3.06 Overview. Unlike many oil-exporting countries, Indonesia has succeeded in expanding the size of its non-oil economy by a significant amount over the past decade. This has been accomplished through a variety of measures, not the least of which has been the investment policy pursued by the Government. In the first half of the 1970s, gross investment grew very rapidly, expanding in real terms by about 18% a year. In the second half of the decade this slowed somewhat to about 12% a year. By 1980 the share of investment in GDP had risen to about 22%.^{/2} In the latter part of

^{/1} Interest payments and amortization as a percent of exports (with the oil sector on a net basis).

^{/2} Some care is needed in interpreting trends in investment from the national income accounts for the 1970s. In this period the implicit deflator for gross investment increased more slowly than that for GDP, the latter being strongly influenced by the increase in oil export prices. By 1980, as a result, the ratio of gross investment to GDP is substantially lower when the accounts are expressed at current market prices than at constant market prices (where the base year is 1973). The important point is that the 1970s was a period of rapid growth in investment outlays.

Table 3.2: MACROECONOMIC INDICATORS - HIGH CASE

	Shares of GDP			Real growth rates	
	1980	1985	1990	1980	1985
	/81	/86	/91	-85	-90
GDP	100.0	100.0	100.0	7.5	7.5
Gross domestic investment <u>/a</u>	21.7	27.2	27.6	12.5	7.8
Consumption	69.9	73.6	73.8	8.6	7.6
Resource balance <u>/b</u>	8.4	-0.8	-1.4	n.a	n.a
Exports	30.5	23.7	20.1	2.3	3.8
Imports	-22.1	-24.5	-21.5	9.6	4.8
Gross domestic savings	30.1	26.4	26.2	4.8	7.3
Private disposable income (non-oil sector)	68.3	63.4	59.3	5.9	6.1
Private consumption (non-oil sector) <u>/c</u>	48.9	47.1	43.7	6.7	5.9

/a These are lower than in last year's economic report owing to a revision in the base figures in the national accounts. In addition, the underlying statistics used to calculate these shares are expressed in current prices, while constant 1973 prices were used in last year's report.

/b Includes goods and nonfactor services. The resource balance is equivalent to the negative of "foreign savings."

/c This treats the private component of gross domestic savings as being entirely due to the non-oil sector, and so probably underestimates private consumption.

Source: Bank staff estimates (Annex I, Table 15).

the decade in particular, the Government was able to pursue a broadly based investment strategy in which public investment (by the Central Government and public enterprises combined) expanded by about 14% a year in real terms and private investment by almost 10% a year. By 1980/81 the private sector accounted for about 53% of aggregate investment, and the Central Government for about 32%, with the remaining 15% coming from public enterprises.

3.07 Because of the need for relatively larger investment in physical infrastructure (especially in transportation, and power generation and

transmission), the start of a number of large, capital-intensive projects in the industrial sector, and increased outlays for human resource development, continued rapid growth in aggregate investment will be necessary in the first half of the 1980s. Public investment (Central Government and public enterprises combined) would have to grow about 16% a year in this period, while private investment would increase at about 9% a year in real terms. Gross investment would therefore continue to expand at about 12% a year and its share in GDP would rise to about 27% by 1985. In the second half of the decade the growth of public investment is projected to slow down to about 7% a year in real terms, whereas private investment is projected to continue expanding at about 9% a year, and could even accelerate. The share of gross investment in GDP would rise marginally to about 28% in the latter part of the decade.^{/1}

Table 3.3: TRENDS IN GROSS INVESTMENT, 1975/76-1990/91
(at 1980/81 constant prices)

	Share of GDP (%)				Average annual percentage increase		
					1975/76-	1980/81-	1985/86-
	1975	1980	1985	1990	1980/81	1985/86	1990/91
Gross investment	17.9	21.7	27.2	27.6	11.7	12.5	7.8
Central government	5.0	6.8	9.4	9.3	14.4	14.5	7.3
Public enterprises	2.4	3.2	5.4	5.0	13.9	19.2	5.9
Private ^{/a}	10.5	11.6	12.4	13.3	9.7	9.0	9.0

^{/a} Estimated as a residual. Includes public enterprises such as Pertamina for which no figures are available.

Source: Bank Staff Estimates and Table 3.4

3.08 An investment program of this magnitude raises a number of important questions for resource management policies: (a) how can the required sectoral allocation of investible resources be accomplished? (b)

^{/1} The Incremental Capital Output Ratio (ICOR), which rises to over 3.5 for the period 1982-87, is assumed to decline slightly thereafter, settling at 3.2, about the same level as in the latter part of the 1970s.

can sufficient domestic resources be mobilized to carry out the program without excessive dependence on foreign financing? (c) if the needed domestic and foreign resources are not forthcoming, what are the main elements of flexibility in the investment program; that is, to what extent can the investment program be reduced, and to what extent can dependence on foreign financing be increased? Issues dealing with resource mobilization and financial intermediation are discussed later in this chapter while those related to the size and allocation of public investment are dealt with below.

3.09 The Public Investment Program. Investment outlays by the Central Government are projected to continue expanding at about 15% a year in real terms in the first half of the decade, whereas the growth in investment by public enterprises is projected to accelerate to 19% a year. As Table 3.4 indicates, the continued rapid growth in Central Government investment does not arise from any one source, but for the most part represents a broadly based expansion in basic infrastructure, like transport and irrigation, and in education, health, housing and water supply. The object of this strategy is to lay the foundations for sustained growth in the latter part of the decade and in the 1990s. The higher growth in public enterprise investment expenditures stems from the planned major expansion in tree crop development in the Outer Islands, the acceleration in power generation and transmission investments, and the start of a number of large, capital-intensive projects in the industrial sector. It is reasonable to ask whether, in the light of the recent deterioration in the international economic environment and the consequent weaker domestic resource position of Indonesia, the Government should still plan to carry out its rather ambitious investment program. The mission has given this matter considerable attention. Given Indonesia's projected domestic resource position, and the very considerable untapped foreign borrowing capacity, which are discussed at greater length below, there is currently no justification for cutting back on the program for the first half of the 1980s. The program is within the presently projected financial capacities of the country, and if it is successfully implemented, it will go a long way towards laying the foundations for sustained growth later in the decade. Moreover, a large part of the program - especially the major projects in power, transport, irrigation, and industry which have long gestation periods - are already under implementation. To slow or stop their implementation would be costly and would disrupt output and employment growth elsewhere in the economy. While the Government should plan to go ahead with all the high priority projects in its development program, it would only be prudent to undertake a careful assessment of priorities within each sector to ensure that the plans of individual line agencies and public enterprises are consistent with projected funding availabilities and with implementation capacities. As the subsequent discussion indicates, the latter rather than the former is likely to be the more serious constraint to implementation in the coming years.

Table 3.4: HISTORICAL AND PROJECTED PATTERNS OF PUBLIC SECTOR INVESTMENT, 1975/76-1990/91 (at 1980/81 constant prices)

	Average annual percentage increase			Share in GDP (%)		
	1975/76- 1979/80/ <u>a</u>	1980/81- 1985/86	1985/86- 1990/91	1980 /81	1985 /86	1990 /91
Agriculture	n.a.	25.7	9.5	0.9	2.1	2.3
Central Government	12.6	13.8	13.9	0.7	1.0	1.3
Public enterprises	n.a.	48.0	5.1	0.2	1.1	1.0
Infrastructure <u>/b</u>	-	14.5	8.6	2.3	3.1	3.3
Central government	-5.1	14.1	7.0	1.3	1.8	1.7
Public utilities	11.1	15.1	10.5	1.0	1.3	1.6
Industry and mining <u>/c</u>	17.5	31.0	-	0.8	2.1	1.4
Education and health <u>/d</u>	17.0	19.3	7.0	1.4	2.4	2.3
Shelter, urban & water supply	47.6	36.3	10.1	0.2	0.7	0.9
Central Government	n.a.	40.1	4.7	0.1	0.4	0.4
Public enterprises	n.a.	31.9	16.0	0.1	0.3	0.5
Other <u>/e</u>	n.a.	7.4	6.3	4.4	4.4	4.1
<u>Total</u>	<u>14.3</u>	<u>16.1</u>	<u>6.8</u>	<u>10.1</u>	<u>14.8</u>	<u>14.3</u>
Central Government	14.4	14.5	7.3	6.9	9.4	9.3
Public enterprises	13.9	19.2	5.9	3.2	5.4	5.0

/a For historic growth rates, recorded actual development expenditures were deflated by the GDI (gross domestic investment) deflator.

/b Includes transportation and communications (Central Government) and power (public utilities)

/c Public enterprises only.

/d Central Government only.

/e Includes manpower and transmigration, regional development, trade, cooperatives, religion, etc.

Source: Bank Staff Estimates.

3.10 What then are the main elements of the proposed public investment strategy for the 1980s? Although there is no up-to-date and detailed statement of the planned level and sectoral allocation of public investment, last year's economic report did include a detailed review of the priorities as they were then understood.^{/1} Since that time additional analysis of the proposed program has been undertaken by the mission to develop rough estimates of the orders of magnitude of the investment programs needed in each sector to realize the Government's objectives. These are summarized in Table 3.4.

3.11 In agriculture, irrigation and water resource development account for a large share of Central Government development expenditures. These will have to continue growing at about 14% a year in real terms throughout the decade. As indicated in last year's economic report, higher production from areas already under cultivation will increasingly require heavy investments in longer-gestation projects that will be slow to yield benefits (e.g. new irrigation systems rather than rehabilitation of existing ones, watershed protection and development). At the extensive margin it will be lower quality or increasingly inaccessible land that will be brought into production. All these factors will lead in the direction of relatively higher public outlays to ensure that agricultural output continues to expand at a rate of 3.5% a year. The tree crop program for the Outer Islands, which is designed to provide a threefold increase in employment and export earnings by the end of the decade, is indeed ambitious. It will require a very large increase in expenditures in the first half of the 1990s. As noted last year, successful implementation will depend on overcoming nonfinancial, particularly manpower constraints in the program.

3.12 In the field of industry, the Government's plans to implement a number of large, capital-intensive projects are well advanced. Outlays for these projects, all of which will be publicly-owned, are projected to grow very rapidly in the first half of the decade. Projects in the industrial and mining sectors either under construction or preparation are estimated to cost about \$12.5 billion over the 1981-86 period. These include oil refineries (\$2.9 billion), LNG plants (\$1.6 billion), petrochemicals (\$1.7 billion), fertilizer (\$0.6 billion), cement (\$0.5 billion), pulp and paper (\$0.5 billion), mining (\$2.5 billion) and metals (\$2.2 billion). Once these large projects are established, the growth in public industrial investment should level off in the second half of the decade. These projects should result in a new round of private investment in downstream industries like metal fabrication, chemicals and textile fibers, and as a result the projected 9% growth in private investment could turn out to be conservative.

^{/1} World Bank, Indonesia: Development Prospects and Policy Options. Report No 3307-IND, April 6, 1981, Chapter 4.

3.13 With the high economic growth of recent years, it has become obvious that inadequacies in basic infrastructure - power generation and transmission, transport, storage and communications - are increasingly serious constraints to continued rapid development. Of particular concern are the transport and power sectors. High economic growth has placed considerable strain on existing transport facilities, and inadequacies in the system are already beginning to seriously impede future growth. Additional investment in the transport sector is particularly urgent in linking resource-based investments in the Outer Islands with output and income growth on Java. As an important part of its overall development strategy, the Government has embarked upon a major investment program in resource-based activities in the Outer Islands; investments in tree crops, transmigration, industry and mining are likely to cost over \$10 billion in the 1981-86 period. In addition to the obvious direct transport needs of these projects, a more efficient transport system is essential if indirect multiplier benefits are to be achieved as desired. Rising consumer demand in Sumatera, Kalimantan and Sulawesi brought about by these investments, notably in tree crops and transmigration, should ideally be translated into increased demand for industrial goods produced within Indonesia, rather than in neighboring countries. But a preference for, say, Javanese rather than imported consumer goods is unlikely unless unit transport costs are significantly reduced for inter- and intra-island transportation. In recognition of these needs the Government is developing a major program for expansion and modernization of its national ports and the maritime industry. The recent past trend of declining outlays for transport sector investment will have to be reversed in the first half of the 1990s. To meet demand for transport services which is projected to grow at about 12% a year, public investment outlays will have to expand in real terms at about 14% annually between now and 1986.

3.14 The needs of the power sector have recently been reviewed in detail under the auspices of the UNDP/World Bank energy assessment program.^{/1} One of the major findings of this study was that investment in the sector would have to expand by about 13% a year during the 1980s if Indonesia's commercial needs for electric power are to be met, and if there is to be some progress towards expanding household access to electricity.

^{/1} Required investments in the energy sector are outlined in World Bank/UNDP; Indonesia - Issues and Options in the energy Sector; Report No. 3543-IND, November 1981. The projections presented here in the power and mining sectors are consistent with that report, which recommended an increase in energy investment from 2% of GDP to 4% during the 1980s. However these figures included petroleum exploration, which is excluded in the present analysis.

3.15 Based on the assessment of programs and priorities for human resource development set out in Chapter 6 of this report, the mission believes that investment outlays in this area will have to expand very rapidly in the first half of the decade, followed by a somewhat slower rate of increase thereafter. For the decade as a whole an increase in outlays of about 13% a year will be needed if there is to be continued progress in expanding access to education and health services, if basic shelter for the population is to be improved, and if the present shortage of skilled manpower is to be overcome.

3.16 Planning and Implementing the Program. The proposed public investment program is ambitious and, as noted already, there is a question as to whether the program can be fully implemented. It can succeed only if close attention is paid to project formulation and planning among the various agencies of the Government and if concerted efforts continue to be made to build up the capabilities of these agencies and of the domestic construction industry.

3.17 Project planning and implementation has, in the past, been affected by such problems as long delays in initiating projects and in construction schedules that, in turn, lead to cost overruns. The reason for these delays include difficulties in land acquisition, delays in contract awards and in budgetary releases. The Government is aware of these problems and has been taking action on a number of fronts. There have, for example, been concerted efforts to improve the budgetary process in recent years, although there is a continuing need for a more coherent approach to medium-term financial planning to improve links between the sector and project planning on the one hand, and the budget on the other. Further efforts to build up the sectoral and project planning capacities of the line agencies will be needed if the Government's ambitious development for the 1980s is to be implemented successfully.

3.18 There is also a need for continued close attention to maintenance of public facilities and equipment. Insufficient budget allocations for maintenance can result in sharp reductions in the economic life of facilities. The proposed Government program for the 1980s obviously has important implications for the growth of recurrent expenditures. Over the longer term there is little scope for squeezing routine expenditures on personnel and materials in order to raise public saving, although efficiency in using routine outlays can immediately be improved in the near term. Indeed, in many cases incremental recurrent outlays - for example in road and irrigation maintenance or in raising teachers' salaries - may have as high a return as new investment. Recurrent outlays on social sector investment are generally higher than for economic infrastructure; Chapter 6

presents the projected requirements that are assumed in the present calculations./1 For other sectors, a 10% real annual growth rate is assumed.

3.19 If the proposed investment program is to be successfully implemented, the construction industry will have to be strengthened and expanded. Over the decade, it will have to grow at about 10-12% a year. This growth will offer important opportunities for expanding productive employment in the economy. The sector could be creating in excess of 100,000 jobs a year during the 1980s, which would be a major contribution in both rural and urban areas. But if the industry is not to become a bottleneck to implementing the investment program, Government policies will need to encourage the expansion of the sector. An improvement in the working environment for the construction industry will involve simplification of contracting procedures, elimination of inequitable practices, and arrangements to improve the flow of funds to contractors. The Government is aware of these problem and is considering proposals for improvements in three broad areas: (a) contracting procedures, conditions of contract licensing and prequalification of contractors; (b) availability of credit and equipment and (c) upgrading contractors' associations, training of contractors' personnel, establishment of a construction industry information system and other institutional improvements. Some of these changes will inevitably take time to implement, but it is likely that substantial improvement in the industry could be achieved in the short-term, with accompanying savings to the Government, if measures to expedite award of contracts and minimize delays in contract execution were given a high priority./2

Financing Development Expenditures

3.20 Raising the gross investment rate from the current level of 22% to 27% of GDP by 1985 will require vigorous efforts to promote domestic savings, which in 1981 were about 25% of GDP. Domestic savings will have to be raised to moderately higher levels, despite the fact that oil revenues -

/1 Recurrent expenditures on the social services accounted for 25% of total recurrent expenditures in 1980/81.

/2 Such measures include establishment and enforcement of standards for licensing of building and civil works contractors, prequalification of contractors, preparation of standard bidding documents and conditions of contract, improved procedures for making advance and periodic progress payments promptly, introduction of price escalation formulae for multiyear contracts, and improved arbitration procedures for handling contract disputes.

an important source of domestic savings - will become relatively less important in the 1980s. In other words, savings from non-oil sources of income will have to be expanded substantially during the 1980s (Table 3.5). There are three important domestic revenue mobilization issues to be addressed:

- (a) can Central Government revenues be expanded sufficiently to meet the projected real increase in recurrent outlays and finance a major share of the Government investment program?
- (b) how can the major expansion in public enterprise investment be financed, since their retained earnings will be sufficient to meet only a small part of the program?
- (c) inasmuch as private domestic savings will be needed to finance part of the public investment program, what measures will be needed to promote these savings in a financial form?

Table 3.5: FINANCING THE INVESTMENT PROGRAM

	As percent of GDP		
	1980	1985	1990
<u>Gross Investment</u>	21.7	27.2	27.6
Public	10.0	14.8	14.3
- Central Government	6.8	9.4	9.3
- public enterprises	3.2	5.4	5.0
Private <u>/a</u>	11.6	12.4	13.3
<u>Domestic Savings</u>	30.1	26.4	26.2
Public	11.5	11.9	13.1
- Central Government	10.7	10.2	10.5
- public enterprises	0.8	1.7	2.6
Private <u>/a</u>	18.6	14.5	13.1
<u>Foreign Savings</u>	-8.4	0.8	1.5

/a Estimated as a residual. Includes public enterprises such as Pertamina for which no figures are available.

Source: Bank staff estimates.

3.21 Expanding Public Revenues. This section explores the options for financing the public investment program described above. First, the scope for raising net revenues from the oil sector will be reviewed; as would be expected, the greatest potential here comes from domestic sales, through subsidy elimination, rather than through raising export revenues. At present, revenues from domestic and export taxes on oil and gas account for 70% of total Government revenues. Even under the assumption that all existing economic subsidies on domestic oil sales are removed, revenues from the oil sector are likely to increase in real terms at an average of less than 2% p.a. for the remainder of the decade. Since total Government expenditures are projected to grow at about 10% p.a. it is clear that the bulk of the new finance must come from the non-oil sectors. Second, non-oil taxation prospects will be discussed in this section and reasonable targets for the years ahead will be described. Third, the option of using existing accumulated government savings as an interim source of finance will be discussed. Fourth, opportunities for financing public enterprise investments outside the budget will be outlined.

3.22 The Role of the Oil Sector. The public finance picture is highly sensitive to oil production and to both the export and domestic price of oil. Trends in production will be reviewed in the next chapter (para. 4.03). Oil sector projections are based on the assumption that the average export price for Indonesian crude oil will remain unchanged throughout 1982/83, and thereafter will increase in line with international inflation through 1985/86 (see Table 3.6). In the second half of the decade oil prices are projected to rise at 3% a year above the international inflation rate. The sensitivity of budget revenues and the balance of payments to these assumptions will be reviewed in a later section (para. 3.40). In considering the future revenues from oil it is convenient to distinguish between receipts from taxes on oil exports and receipts from the sale of oil in the local market./1 The former is a relatively straightforward

/1 For analytical purposes it is convenient to distinguish between two broad categories of oil in Indonesia. First is the oil produced by private oil companies and bought by the Government at international prices for disposal by Pertamina in overseas or local markets. The Government values this oil at international prices for the purpose of determining the tax obligations of these oil companies, and it is this amount which is actually recorded in the budget as oil revenues. Second is the so-called pro rata oil, which is that proportion of a private oil company's production which accrues directly to Pertamina for sale in the local market. The budgetary subsidy arises then from that portion of the oil which is purchased by the Government from private companies at international prices but which is then sold in the local market at lower prices. The full economic subsidy is obtained by adding to the above budgetary subsidy an amount equal to the pro rata oil sold in the local market valued at the difference between domestic and international prices.

Table 3.6: POTENTIAL OIL AND LNG REVENUES: ACTUAL AND PROJECTED
(Rp trillion, current prices)

	1980 /81	1981 /82	1982 /83	1983 /84	1984 /85	1985 /86	1990 /91
International oil price (\$/bbl) <u>/a</u>	32.3	35.5	35.5	38.3	41.8	45.3	69.8
Budgetary revenues <u>/b</u>	7.0	8.6	7.6	9.8	11.5	13.0	22.1
Oil	(6.5)	(8.0)	(7.0)	(9.1)	(10.6)	(11.6)	(19.1)
LNG	(0.5)	(0.6)	0.6	(0.7)	(0.9)	(1.4)	(3.0)
Value of pro rata oil <u>/c</u>	1.6	1.2	1.4	1.6	1.7	1.9	2.7
<u>Potential oil revenues /d</u>	<u>8.6</u>	<u>9.8</u>	<u>9.0</u>	<u>11.4</u>	<u>13.2</u>	<u>14.9</u>	<u>24.9</u>
<u>Of which:</u>							
From exports	6.6	7.2	6.1	8.2	9.3	10.3	14.4
From domestic consumption	2.0	2.6	2.9	3.2	3.9	4.6	10.5

/a See Para. 3.40 for a review of an alternative scenarios for international oil prices.

/b This is an estimate of receipts as defined in the Central Government budget. It excludes an important additional receipt due to the flow of pro rata supplies from private oil companies to Pertamina.

/c "Pro rata" oil is that proportion of a private oil company's production that accrues directly to Pertamina for sale in the local market. It is separate from the tax on oil production. It traditionally does not appear in the budget. See foot note to para. 3.22. The future movement of pro rata supplies is unclear. For the present projection they are assumed to remain constant at about 65 mby, on the grounds that the decline in contracts of work production (with a higher fraction of pro rata supplies) is made up by rising overall production and a rising rate of contribution by production-sharing companies, and with a declining share of production operating under incentive schemes (under which Pertamina pays the international price for pro rata supplies). The results are fairly robust with respect to changes in this assumption.

/d This represents total receipts from production by oil companies. The total value is allocated between the export and domestic sectors according to simple quantity shares, since the actual allocation from oil fields is not relevant to the present analysis. LNG revenues are as given in the budgetary definitions and entirely derived from exports.

Source: Bank Staff Estimates. Annex 1, Table 11.

calculation. Given projected production and domestic consumption (see Annex 1 Tables 4 and 11 for details) the exportable surplus would decline from 443 mmb1 in 1980/81 to 434 mmb1 in 1985/86 and then to 335 mmb1 by 1990/91. Tax revenues from these sales would increase from Rp. 6.6 trillion in 1980/81 to Rp. 14.4 trillion in 1990/91 (at current prices). In real terms these receipts, which accounted for 73% of total revenues in 1980/81, would remain virtually unchanged during the 1980s. Receipts from sales of LNG, which would increase from Rp. 0.4 trillion in 1980/81 to Rp. 3.0 trillion in 1990/91 would not offset the effects of the decline in Indonesia's exportable surplus of oil. To ensure a continued strong growth in Government revenues domestic oil subsidies must therefore be reduced, and a vigorous program instituted to increase receipts from non-oil incomes.

3.23 Temporary subsidies on oil products serve a useful function in protecting the economy from the disruptive impacts of external oil price shocks. However, in addition to diverting public resources from the development effort, they also constitute a major distortion in the incentive structure, encouraging energy-intensive activities, and tend to favor relatively well-off household groups. The 60% increase in domestic oil prices announced in January 1982, described in Chapter 2, was a major step in eliminating these distortions. As a result the Government has raised an additional Rp. 1.2 trillion in revenues over what would have been available had no increase occurred, equivalent to 14% of the development budget. On average, domestic oil prices, which were 35% of their equivalent international prices in 1981, have been raised to 56% in 1982. The economic subsidy is now about Rp. 2.4 trillion, equivalent to 3.8% of GDP, compared with almost 6% over the last year. Despite the actions in January 1982, therefore, subsidy levels remain high.

3.24 For the purposes of assessing the scope for future increases in domestic revenues from oil, two sets of calculations are needed. First is to determine what may be referred to as the potential oil revenues which could be obtained if Indonesia's oil sold in the domestic market were valued at the prevailing international price. This calculation is set out in Table 3.6. The potential revenues from oil production rise from Rp 8.6 trillion in 1980/81 to about Rp. 25 trillion in 1990/91. As Table 3.6 indicates, oil sold in the local market, when valued at international prices, is projected to rise from Rp 2 trillion in 1980/81 to Rp 10.5 trillion in 1990/91. The second step in the calculation is to determine the rate at which projected revenues from domestic sales will actually rise as result of increases in domestic prices and hence, reduction in the subsidy. The results of these calculations are set out in Table 3.7. It is assumed that the domestic price of oil will be raised steadily so as to eliminate all economic subsidies by 1990/91. This would require an average increase of 7% a year

Table 3.7: DOMESTIC OIL PRICES AND SUBSIDIES - HIGH CASE

	1980/ 81	1981/ 82	1982/ 83	1983/ 84	1984/ 85	1985/ 86	1990/ 91
Real annual price rise <u>/a</u>	-	-8.4	22.6	7.0	7.0	7.0	7.0
Domestic consumption (mdbl p.a.) <u>/b</u>	144	164	180	197	215	236	347
Budgetary subsidy (Rp. trillion at current prices)	1.0	1.4	0.9	0.9	0.8	0.6	-2.8
Economic subsidy (Rp. trillion at current prices)	2.3	2.8	2.4	2.5	2.5	2.5	-
Domestic oil tax <u>/c</u> (Rp. trillion at current prices)	-0.3	-0.2	0.5	0.7	1.4	2.1	10.5
<u>Memo items:</u>							
Unit subsidy (%) <u>/d</u>	61	59	44	39	34	28	-
Economic subsidy as % of GDP	5.3	5.4	3.8	3.4	2.9	2.4	-

/a The price assumptions for the High have the same rationale as in the 1981 economic report. The annual increase (above the domestic inflation rate) is that required to eliminate the economic subsidy by 1990/91. In January 1982 domestic oil prices were raised 60%. Since this occurred three quarters through the fiscal year, its effect is distributed accordingly.

/b This is based on an income elasticity of 1.7 and a long-run price elasticity of -0.3. Under the High case the income elasticity declines to 1.5 in the second half of the decade with the shift to a less energy-intensive structure of production.

/c Difference between potential oil revenues from domestic consumption in Table 3.6 and the economic subsidy above.

/d The ratio of the unit economic subsidy to the international price.

Source: Bank Staff estimates. Annex 1, Table 12.

in real terms, after taking account of the January 1982 price increase.^{/1} Under this assumption the current value of the economic subsidy is relatively stable in the first half of the 1980s at about Rp. 2.5 trillion and then declines rapidly in the latter part of the decade. In relation to GDP the economic subsidy declines from 5.4% in 1981/82 to 2.4% in 1985/86.

3.25 Non-oil Taxation. Over the last few years, Indonesia's non-oil tax effort has been deteriorating from an initially low level relative to other countries. The overall tax buoyancy with respect to nominal GDP which was 1.0 in 1968-78 fell to 0.9 in the three subsequent years. In view of the relative abundance of oil taxes, this may have been an appropriate policy; it has been one mechanism for allowing an effective transfer of the oil windfall to the private sector. However, as is indicated in the 1982/83 budget (see Chapter 2), the Government is now looking to non-oil taxation as a major source of revenue to substitute for declining oil revenues. In addition, the government has commissioned a major study of the tax system with the primary aims of raising revenue and making the system more efficient. While detailed review of the long-term revenue potential will have to await the results of this study, a rough estimate can be made on the basis of international comparisons. For these purposes the indicator used for Indonesia (and other oil exporters) is the ratio of non-oil taxes to non-oil GDP.^{/2} On this basis Table 3.8 clearly suggests that Indonesia is taxed well below its potential. Only Nigeria, with a higher ratio of oil receipts to GDP, has a lower ratio. It is noteworthy that a tax effort of 12% or more was achieved both by the significantly poorer South Asian countries and the two ASEAN countries, which had an income level in 1979 close to the projected level for Indonesia in 1990. This appears to be a reasonable target level for the present exercise, that could in principle be achieved by the end of the decade without drastic changes in the economic structure.^{/3} However, it would require an average real growth rate of about 11% p.a. over the decade, equivalent to a tax buoyancy with respect to GDP of 1.5 (in real terms). These are high values, especially by comparison

^{/1} For convenience we assume steady progress towards the objective of eliminating the economic subsidy. But obviously there are other options open to the Government, including a more rapid elimination of the subsidy which would boost Government savings more dramatically in the nearer term.

^{/2} As the national accounts statistics do not provide direct estimates for nonmining GDP this is used as a proxy for this value.

^{/3} The 1979 IMF mission on non-oil taxation reached a very similar conclusion on the basis of a comparison of the performance of individual taxes in ASEAN countries in 1977, i.e., before the second oil shock.

Table 3.8: COMPARISON OF TAX EFFORT BETWEEN INDONESIA
AND OTHER COUNTRIES

	Year	GNP per capita <u>/a</u>	Non-oil taxes as % non-oil GDP
<u>Oil Exporters</u>			
Indonesia	1980	370/ <u>b</u>	8.6
Nigeria	1978	670	6.9
Mexico	1979	1,640	13.3
Algeria	1979	1,590	26.2
<u>Asian Oil Importers</u>			
Thailand	1979	590	12.3
Philippines	1979	600	11.5
Pakistan	1979	260	12.2
India	1979	190	12.0
Sri Lanka	1979	230	21.3

/a In 1979, from 1981 World Development Indicators.

/b About \$640 (1979 prices) in 1990 with a GDP growth rate of 7.5% p.a.

Source: IMF Government Finance Statistics Yearbook and IFS, and Bank economic reports.

with Indonesia's historical performance. However, comparable rates have been achieved by other countries, /1 and it is generally considered that Indonesia's tax collections are now substantially below their potential. To test the plausibility of the overall figures, a disaggregated projection was carried out. The assumptions are given in Table 3.9 and the results are detailed in Table 13 of Annex I. This is an illustrative exercise and should not be viewed as a judgement on Indonesia's future optimal tax policy.

/1 For example, in a recent study the two developing countries, Malaysia and Kenya, achieved tax buoyancies of 1.7 and over 1.4 over 12-year periods. See Nurun H. Choudry, "Measuring the Elasticity of Tax Revenues: A Divisia Index Approach," IMF Staff Papers, March 1979, pp. 87-122.

Also since the major gains should come from improved tax collection, and not higher rates, it is not possible to use a simple quantitative relation between policy changes and tax increases. The main emphasis is placed on improved collections from indirect taxes and corporate income taxes. The tax burden on international trade is projected to decline, in accordance with the Government's objective of gradual trade liberalization. As Table 3.9 shows, the overall result is achievable with apparently plausible values for individual tax buoyancies. This is largely due to the fact that the proxies for some of the key tax bases (broadly relating to the development of the modern sector) are elastic with respect to GDP growth.

Table 3.9: NON-OIL TAX PROJECTION - PARAMETER VALUES FOR THE HIGH CASE

	Proxy for base	Assumed buoyancy /a	Projected real growth rate (% p.a.) (1981/82-1990/91)
<u>Taxes on Income</u>			
Personal income tax	GDP	1.30	10.0
Corporate income tax	Investment	1.20	12.0
Withholding (MPO)	GDP	1.20	9.0
IPEDA	GDP	1.30	10.0
Other	GDP	1.00	7.5
<u>Taxes on Domestic Consumption</u>			
Sales tax	Manufacturing	1.25	15.0
Excise & others	Manufacturing	1.00	12.0
<u>Taxes on International Trade</u>			
Includes customs duties, sales tax on imports, export duties /b	Imports & exports	0.90	8.0
<u>Total Non-oil Tax Revenue</u>	GDP	<u>1.50</u>	<u>11.0</u>

/a For the projection this is taken as the ratio of the real growth rates of the tax to the tax base.

/b Special allowance is made here for the sharp reduction in budgeted export duties in 1982/83.

Source: Bank Staff estimates. Annex I, Table 13.

3.26 Although the major focus here is on the Central Government budgetary position, local government revenues, which are now equivalent to about 10% of total non-oil revenues, are also important. Among taxes accruing to local government, IPEDA probably has the greatest potential for increase in the future./1 The Government has started a process of urban property revaluation that will gradually cover the whole country; in some areas a real revenue increase of 15% p.a. has already been achieved. In addition to raising receipts from specific sources, there is also a major need to improve the overall fiscal capacity of provincial and kabupaten governments, in particular through a closer linkage between budgetary flows and the functions of different levels of government. The Ministry of Finance is already addressing these problems on the basis of a detailed study of local-center financial relations./2

3.27 The only additional consideration concerns subsidies on food and fertilizer. The Government has already taken measures to reduce food subsidies through increases in wheat and sugar prices. In the 1982/83 budget, food subsidies are Rp 188 billion, down from Rp 310 billion in 1981/82. /3 The question of how quickly fertilizer subsidies should be removed raises complex questions of agricultural and credit policy (para. 6.60), which will not be addressed in detail in this report. However, it is assumed that this subsidy will also be gradually reduced during the course of Repelita IV.

3.28 The results of the foregoing proposal to increase receipts from domestic oil and non-oil income are summarized in Table 3.10. The table shows that a major increase in the overall domestic tax effort would result from action along these lines. The ratio of taxes to GDP rises from 4.8% in 1980/81 to 13.7% in 1990/91, thereby offsetting the decline in taxes on oil exports./4 Total government revenues stay around 20% of GDP. The magnitude of this increase in domestic taxes is, of course, due in large part to the rise in the domestic oil tax. While such tax increases are no doubt painful, it should not be forgotten that Indonesia is still in a favorable position relative to oil importers. Such countries would already

/1 This is argued, for instance, in a recent report to the Ministry of Finance: Kenneth Davey: Central-Local Financial Relations; Development Administration Group, Institute of Local Government Studies, University of Birmingham, May 1979.

/2 *ibid.*

/3 In fact, this has been helped by the large local rice harvest and the decline in international commodity prices.

/4 The ratio with respect to nonmining GDP gives a better indication of the tax burden. It rises from 6.8% in 1980/81 to 18.5% in 1990/91.

Table 3.10: SUMMARY OF DOMESTIC REVENUES AND TAX EFFORT
(Rp trillion, current prices)

Revenues	1980/ 81	High case		Low case	
		1985/ 86	1990/ 91	1985/ 86	1990/ 91
<u>Domestic Oil Tax /a</u>	-0.3	2.1	10.5	1.0	3.7
Potential revenues	2.0	4.6	10.5	4.9	10.8
Less economic subsidy	2.3	2.5	-	4.0	7.1
<u>Non-oil Taxes</u>	2.4	7.6	18.8	6.5	13.3
Taxes	2.9	7.9	18.8	7.0	13.8
Less non-oil subsidies	0.5	0.3	-	0.5	0.5
<u>Nontax Revenues</u>	0.3	0.5	0.8	0.4	0.6
<u>Total Domestic Revenues /a</u>	2.4	10.2	30.1	7.9	17.6
<u>Oil Export Tax</u>	6.6	10.3	14.4	10.0	14.1
<u>Total Revenues</u>	9.0	20.5	44.5	17.9	31.7
<u>Tax Ratios (as % GDP) /b</u>					
Domestic oil tax	-0.7	2.1	4.9	1.0	2.0
Non-oil taxes	5.5	7.5	8.8	6.7	7.3
Nontax revenues	0.7	0.5	0.4	0.4	0.3
Total domestic revenues	5.5	10.0	14.0	8.1	9.6
Oil export tax	15.1	10.1	6.7	10.3	7.7
<u>Total Revenues</u>	20.6	20.1	20.7	18.4	17.4

/a Excludes the tax on oil and LNG exports.

/b GDP projected to grow at 7.5% p.a. and 5.5% under the High and Low cases, respectively.

have experienced the rise in price of petroleum products (with, of course, no fiscal benefits) and yet would still be faced with the problem of maintaining or raising the domestic tax effort.

3.29 Financing the Public Enterprises. As indicated in Table 3.3, in the first half of the decade, investment by the public enterprises can be

expected to grow more rapidly (19% p.a.) than that of the Government (14% p.a.) or the private sector (9% p.a.). In the five year period 1981/82-1985/86, investment by the public enterprises is expected to amount to two thirds of that of the Government (see Annex 1, Table 10).^{/1} In the past, during the period of relative revenue abundance, public enterprises have relied to a large extent on capital transfers from the budget for investment financing, but in the future it will be necessary to rely more heavily on nonbudget sources. Fortunately, there is good potential for obtaining finance from other sources; these include (a) increasing self-financing through operating surpluses of the public enterprises, (b) raising domestic borrowing; and (c) encouraging private equity participation in public sector investments.

3.30 Self-financing of Public Enterprises. Greater financing from internally generated funds requires the adoption of efficient pricing and management policies, and the treatment of public enterprises as independent financial entities. For example, PLN's internally generated investment finance is projected to rise from well under Rp 0.1 trillion in 1980/81 to over Rp 0.4 trillion in 1985/86, with the gradual shift to marginal cost pricing.^{/2} Greater incentives for efficiency should also be given. For the public enterprise sector as a whole real operating income could reasonably be expected to rise annually by well over 10%. Internal finance for new gross investment would rise to Rp 1.7 trillion in 1985/86 and Rp 6.0 trillion in 1990/91.^{/3}

3.31 Borrowing from Domestic Financial Markets. Improved profitability would also directly raise the capacity of public enterprises to borrow commercially. Currently they borrow only from the state banks and such liabilities usually account for about 20% of the money supply. In the projections it is assumed that this proportion remains roughly constant,

^{/1} This list of public enterprises omits a number of large (e.g. PERTAMINA) and small enterprises, for which no data are available.

^{/2} Since there is still significant excess demand for electricity a faster rise in prices may be appropriate if finance becomes a severe constraint.

^{/3} The latest information on the capital account of the public enterprise sector is for 1974-77 from BPS. Operating incomes averaged Rp 0.2 trillion in these years; this was raised to Rp. 0.3 trillion in 1980 to allow for inflation. Projected earnings growth is due to return from new investments as well as the adoption of efficient pricing policies and cost reductions due to economies of scale and improved management and technology.

proving Rp 2.5 trillion between 1981/82 and 1985/86.^{/1} The main potential for providing public enterprises increased access to long-term funds is from nonbank financial institutions; in particular, high priority should be given to the re-establishment of a domestic bond market. A 1978 law provides the legal basis for the floating of bonds of both public and private companies and the Government is encouraging the issuance of bonds by selected public enterprises. Until now however, there has been a reluctance on the part of these companies to submit themselves to the required financial discipline when a cheaper and easier route is to approach the Government for funds. Particular emphasis should, therefore, be given to financially sound enterprises with substantial assets, such as PLN and some of the public estates (PTPs). Demand for bonds is likely to be strongest from the nonbank financial institutions, notably insurance companies and pension funds. Insurance companies, in particular, currently hold large sums of money on deposit with commercial banks which are already over-liquid, having reached their credit ceilings. A reasonable objective in developing the local bond market might be to aim for total financing from domestic bond issues to begin at Rp 0.1 trillion in 1983, rising to Rp 0.6 trillion in 1985/86.

3.32 Private Equity Participation. In the longer term, private domestic investors could contribute significantly to easing constraints to public enterprise investment through equity participation. In the immediate future, however, the scope may be quite limited since the supply of risk capital from the local market for such ventures is small in relation to the overall needs. It may be especially difficult to attract local investors to new public enterprise ventures where the future returns on the investment may be uncertain. Nevertheless, this aspect of the capital market will have to be developed steadily throughout the 1980s. Successful development of the local equity market, not only for participation in public enterprises, but also for private ventures, will allow the Government to broaden the base of private ownership in industry. At present, a large part of manufacturing is fully owned by the Government; as the domestic capital market continues to develop, the Government may wish to pursue programs of divestiture more vigorously. In order to allow investors to spread risks and to encourage small savers to participate in the stock market, the Government has introduced a unit trust (mutual fund) system, operated by P.T. Danareksa in the Jakarta stock market. Over time this system could also be applied to shares of public enterprises. While the above discussion relates to the mobilization of domestic savings, there is also scope for foreign direct investment to play an important role in easing the financial constraints of

^{/1} Calculations exclude Pertamina and BULOG. It is very difficult to separate out loans for fixed and working capital, since most short-term loans are rolled over. It is assumed that 75% of total credit is for investment.

the public enterprises. In the short run the most realistic sectoral candidates appear to be in industry and geothermal power, while in the medium term the tree crop sector appears promising. The scope for direct foreign investment as a whole is discussed in the next chapter (para. 4.33).

3.33 Overview of Public Sector Financing. Table 3.11 summarizes expenditure and resource projections for the public sector. It clearly shows the squeeze in public savings in the next few years, coinciding with a rapid expansion in public investment requirements. Even with the major new initiatives on domestic resource mobilization, public savings (including both Government and public enterprise savings) rises in real terms at a much slower rate (8.6% p.a.) in the first half of the decade than investment requirements (14.5%). The net financing requirement is Rp 12.9 trillion for the 1981-85 period. If about one third of this can be financed from previously accumulated Government savings, and another quarter by domestic borrowing of public enterprises, this leaves a net external financing requirement of about Rp 5.1 trillion, or \$8.1 billion./1 In the second half of the decade the policy initiatives for resource mobilization begin to bear fruit, and at the same time the rate of growth of public investment declines (with the completion of the major lumpy investments). Total public savings increases by almost 80% in real terms (12% p.a.) while investment increases by only 35% (6% p.a.). The required net external financing is about \$10 billion in nominal terms. In the next chapter it is shown that a reasonable external debt strategy can be devised to generate the net transfers required for both the budget and the balance of payments.

3.34 Mobilizing Private Savings. Continued growth in private savings is essential if the overall investment program is to be financed without excessive inflation. At the same time it must be acknowledged that increased domestic taxation and reductions in subsidies, advocated under the High case, are likely to result in a slower growth of private savings than in the past. For this reason, it will be necessary to make institutional and policy changes to stimulate both the overall growth of private savings and the proportion held in a financial form. In this respect the formal financial markets must play an important role. The development of the bond market has already been emphasized as an important means of financing the public enterprise investment program. But this is only one aspect of the financial reform program required to mobilize domestic savings and improve the link between savers and investors.

3.35 The current financial system, characterized by controlled interest rates, and the absence of long-term financial instruments, tends to discourage the overall growth of domestic savings, and to encourage

/1 These borrowing figures are net of amortization and interest payments.

Table 3.11: SUMMARY OF PUBLIC SECTOR INVESTMENT AND FINANCE - HIGH CASE
(Rp trillion, current prices)

	1980 /81	1981 /82	1982 /83	1983 /84	1984 /85	1985 /86	1990 /91
<u>Public Investment</u>	4.4	5.9	9.4	11.2	12.5	15.0	30.7
Central Government	3.0	3.7	4.6	6.3	7.8	9.6	20.0
Public enterprises	1.4	2.2	4.8	4.9	4.7	5.4	10.7
<u>Public Sector Savings</u>	5.0	5.3	5.7	8.3	10.0	11.7	25.5
Government savings	4.7	4.9	4.9	7.2	8.7	10.0	19.5
Government revenue (net) /a	(9.0)	(10.1)	(10.7)	(14.2)	(17.3)	(20.5)	(44.5)
Recurrent expenditure /b	(4.3)	(5.2)	(5.8)	(7.0)	(8.6)	(10.5)	(25.0)
Public enterprise savings	0.3	0.4	0.9	1.1	1.3	1.7	6.0
<u>Financing Requirement</u>	-0.6	0.6	3.6	2.9	2.5	3.3	5.2
Rundown of <u>de facto</u> budget surplus /c	-1.1	-	1.8	0.8	0.8	0.6	-
Domestic borrowing	0.3	0.3	0.4	0.6	0.8	1.3	3.5
External financing requirement /d (in \$ billion)	0.2 (0.3)	0.2 (0.3)	1.4 (2.2)	1.5 (2.4)	0.9 (1.4)	1.4 (2.2)	1.7 (2.7)

/a Revenue less subsidies. See Annex 1, Table 14.

/b Excludes debt service; includes recurrent content of the development budget.

/c Use of Accumulated Public Savings. The Government's net assets with Bank Indonesia have risen to over Rp 4 trillion in the last two to three years. This represents funds that have left the budget accounts, and appears to correspond to various categories of delayed expenditures; it can be a source of effective financing in the next few years. This applies even when the reserves are tied to specific uses since the projected expenditures in the above section related solely to actual implementation and so include these delayed expenditures. This would be a very sensible way of spreading the oil windfall of 1978-80 over a longer period, and can in particular act as a source of short-term finance while the longer-term resource mobilization measures get underway. From a monetary viewpoint the rundown of an accumulated reserve is equivalent to an increase in aggregate money supply through money creation and so has to be related to the overall movement in monetary indicators (para. 3.37). It can be safely done as long as foreign exchange reserves are sufficient to cover the import spillover resulting from the spending of the government surpluses accumulated in earlier years, as is the case.

/d Includes foreign equity in "public" investment and net transfers from public external debt (i.e. with debt service netted out).

Source: Bank staff estimates, Tables 3.4-3.10 and Annex I, Tables 10-14.

unproductive "leakage" of some of the saving that does occur. Because many savers currently do not perceive the formal banking system to offer a satisfactory return, they seek other outlets for their savings, notably through purchasing land and gold, or holding funds outside Indonesia. Land speculation in both urban and rural /1 areas in Indonesia has become a serious problem. It not only causes a number of well-known social difficulties, but also tends to reduce the amount of savings that enters the formal financial markets./2 Of course, land speculation is not caused solely by the inadequacy of the domestic financial markets, but there is little doubt that the problem would be less severe if there existed a broader menu of financial assets./3 The same applies to the domestic gold market. Although no precise data are available, it is probable that a substantial proportion of private savings, especially among lower and middle income groups, is held in the form of gold. In net terms this represents a financial outflow from Indonesia since most gold is imported.

Uncertainties in the Analysis

3.36 The above analysis presents a relatively optimistic outlook for the coming years, that is consistent with the High policy case assumptions. There are, however, several reasons why the outcome may turn out rather differently and, given the uncertainties involved in any projections, it is important to explore the sensitivity of the outcome to changes in some of the key assumptions. This section explores three questions:

- (a) Is the macro-economic picture described under the High case consistent with domestic monetary stability?
- (b) What is the effect on the outcome if movement towards the required policy reforms is slower than that assumed under the High policy use?
- (c) Can the public investment program still be financed if oil prices fall below the assumed levels?

/1 See for example Soentoro, Collier and Hartoyo: Land Tenure and Labor Markets in East Java; Agro-Economic Survey, Bogor, August 1981.

/2 This occurs to the extent that sellers of land do not save the entire revenue from the sale.

/3 In the same regard, a more comprehensive system of land taxation is also desirable.

3.37 Monetary stability. There are two inherent risks in the macro-economic strategy outlined above. These are: (i) that the ambitious expenditure program can only be financed by an excessive expansion in the domestic money supply; and (ii) that by ensuring adequate funds for the public investment program, credit to the private sector may be squeezed. It is therefore important to demonstrate that the financing strategy outlined in Table 3.11 is consistent with domestic monetary stability and that the private sector is not "crowded out."

3.38 In broad terms, there are three major components of money supply expansion: changes in the net foreign asset (NFA) position of the banking system (balance of payments); credit expansion to the public sector (Government and public enterprises); and credit expansion to the private sector. In 1979/80 and 1980/81, when foreign exchange was flowing rapidly into Indonesia (mainly into Government accounts), the Government ran substantial de facto budget surpluses; this was the appropriate response to the inflationary external influences. Over the next few years, when the balance of payment is likely to exert a deflationary, rather than an inflationary influence, it is quite appropriate that the Government should run down these accumulated rupiah assets. Although this is equivalent to an increase in the money supply, it need not threaten either overall monetary stability nor credit expansion to the private sector, since in monetary terms it simply compensates for the deteriorating balance of payments (see Chapter 4). This is illustrated in Table 3.12, which presents a plausible scenario for the components of the money supply, and the implied domestic inflation rate, over the next three years.

3.39 The Low Policy Case. If the required policy adjustments are not taken, the budgetary outlook - and indeed the entire domestic resource mobilization effort - is bleak. Lack of progress in raising non-oil tax revenues and reducing the oil subsidy would result in substantially lower government revenues. Total revenues are estimated to be 13% lower than under the High case by 1985/86 and 28% lower by 1990/91 (see Table 3.10). Public savings would be correspondingly lower - by 20% in 1985/86 and by 40% in 1990/91. In the first half of the decade the lower domestic savings could perhaps be compensated through increased foreign borrowing; but in the latter part of the decade it would not be possible to offset shortfalls in domestic savings with additional foreign borrowing while, at the same time, maintaining a manageable external financial position. Investment rates would necessarily decline, as would the growth in output, incomes and employment. And the Government's ambitious programs to expand access to education, health and other services would be seriously compromised. For the decade as a whole, GDP would grow at about 5.5% p.a. in real terms in the Low case, compared to 7.5% p.a. in the High case. From its present level of \$520, GDP per person would increase to about \$700 in 1990 in the Low case, in contrast to \$830 per person in the High case (both at 1981 prices) - a difference in income of almost 20% in a population of 180 million people, or some \$23 billion in aggregate income.

Table 3.12: FACTORS AFFECTING MONEY SUPPLY - HIGH CASE
(Rp trillion, current prices)

	1980/81	1981/82	1982/83	1983/84	1984/85
Change in net foreign assets	2.3	-	-1.1	0.5	0.9
Net credit expansion					
to Central Government	-1.8	-0.1	1.8	0.8	0.8
to public enterprises	0.5	0.4	0.4	0.4	0.4
to business & individuals <u>/a</u>	1.3 (37%)	1.8 (40%)	1.5 (25%)	1.7 (22%)	1.8 (20%)
Other	-0.3	0.2	-0.2	-0.3	-0.3
Total change in money supply	2.1 (36%)	2.4 (30%)	2.6 (25%)	3.1 (23%)	3.6 (22%)
Total broad money (end period)	7.9	10.3	12.9	16.1	19.7
<u>Memorandum item</u>					
Inflation rate <u>/b</u>	17%	11%	12%	10%	9.5%

/a Percentage change in credit to businesses and individuals in parentheses.

/b For 1980/81 and 1981/82 actual consumer price inflation (average 17 cities). Projections for 1982/83 onwards based upon projected money supply and income growth, and on historically estimated money demand functions (real income elasticity of demand for money assumed to be 1.5).

Sources: 1980/81: Bank Indonesia; 1981/82-1983-84: Bank staff estimates.

3.40 Lower Oil Prices. In view of the continuing importance of the oil sector to Indonesia and the current instability in world oil markets, the future price of oil probably constitutes the major uncertainty for Indonesian policy makers. Under the "low oil price scenario", it is assumed that the price of crude oil falls to an average of \$30.50 per barrel during 1982/83 and thereafter remains constant in real terms indefinitely. The price of LNG is assumed to behave in a similar manner. Table 3.13 compares the development of oil prices under the "base" and "low" price scenarios (under the High policy case) and shows the reduction in Government revenues caused by the fall in oil prices. Over the next four years 1982/83 to 1985/86 the total effect on Government revenues would be about Rp 7.6 trillion (\$12.1 billion), equivalent to 2% of GDP. In the second half of the decade the cumulative effect would amount to almost Rp 20 trillion (\$32 billion), or about 2.5% of GDP.

3.41 What would be the appropriate budgetary response to such a shortfall? Table 3.13 illustrates that, at least over the next four years, it would be possible to compensate for the revenue decline, without the need for a major reduction in the public investment program. This would however require a major effort of resource mobilization and subsidy elimination over and above that recommended under the High case. The table details give means of accommodating the shortfall:

- (a) subsidy reduction: under the High policy case, a strategy of gradual reduction of oil subsidies was recommended. As table 3.7 illustrates, this implies that budgetary subsidies would remain at an average of about Rp. 800 billion for the next four years. This could be eliminated by an increase of about 33% in domestic oil prices at, say, the beginning of 1983/84.^{/1} Some consideration might also be given to the reduction of other subsidies; in Table 3.13 it is assumed that one third of the fertilizer subsidy could be eliminated in 1982/83, which would require a price increase of about one third; and
- (b) increased public enterprise saving: Central Government capital transfers to public enterprises (see Annex 1, Table 10) could be reduced further if a major effort were undertaken to improve cost recovery. This could be achieved, for example by the adoption of

^{/1} This domestic price increase is relatively modest precisely because the international oil price is assumed to fall. Under the "base" oil price assumption, it would be necessary to raise domestic prices by over 50% next year to eliminate the budgetary subsidy. The decline in world prices, by itself, causes the budgetary subsidy to fall by about Rp 150 billion.

Table 3.13: PUBLIC FINANCE UNDER THE LOW OIL PRICE (HIGH POLICY CASE)
(Rp trillion, current prices)

	1982 /83	1983 /84	1984 /85	1985 /86	1990 /91
"Base" oil price (\$ per bbl)	35.5	38.3	41.8	45.3	69.8
"Low" oil price (\$ per bbl)	30.5	33.0	36.0	39.0	57.3
<u>Shortfall in Government</u>					
<u>Revenues</u>	1.5	1.7	2.0	2.4	4.9
<u>Accommodation through:</u>					
(a) Reduction in subsidies	0.1	1.0	0.9	1.0	-
(b) Increased public enterprise savings	0.1	0.2	0.3	0.4	0.6
(c) Rundown of <u>de facto</u> surplus	0.8	-	-	-	-
(d) Domestic borrowing	0.1	0.2	0.2	0.2	0.5
(e) Foreign Financing	0.2	0.2	0.2	0.2	0.5
<u>Reduction in Public Investment Program</u>	0.2	0.1	0.3	0.6	3.3

Source: Bank staff estimates.

cost-based pricing for such services as land, rail and sea transportation, public housing, water and sanitation and agricultural services. The single most effective policy change in this regard would be to reduce or eliminate economic transfers through the banking system through subsidized interest rates;

- (c) rundown the accumulated budget surplus: in 1982/83, there is scope for running down Government rupiah deposits more than the Rp. 1.8 trillion suggested under the base oil price assumption. Again, it is important to note that, to the extent that this increased de facto budget deficit in 1982/83 is substituting for reduced foreign exchange earnings, there need be no concern about excessive domestic money expansion since one form of money creation simply substitutes for another;/1

/1 Although the monetary effect is identical, it is important to note that the balance of payments is quite different in the two cases.

- (d) domestic borrowing: under the base oil price assumption, it was suggested that public enterprises might begin to raise funds through the domestic bond market in 1983/84. If a sufficiently high priority were given to overcoming administrative issues, it would be possible to bring this forward by one year; and
- (e) foreign finance: given Indonesia's high creditworthiness, it will be possible to borrow somewhat more than the sum implied in Table 3.11. This option will be discussed in detail in the next chapter.

3.42 The purpose of the above discussion (and Table 3.13) is to illustrate the feasibility of accommodating a lower oil price during the first half of the decade without a major cut-back in the public investment program. It is not to argue that such a course should be taken. The strategy illustrated in the table would imply an additional effective tax burden on private consumption. For example, in 1983/84, the reductions in subsidies and increased cost recovery of public enterprises would effectively transfer about Rp 800 billion from the private sector to the Government above what is suggested under the High case; this is equivalent to about Rp 5,000 per capita. Whether such a policy course is appropriate depends more on political than on economic considerations. One thing that is quite clear from the analysis however, is that while over the next four years or so, it would not be necessary to reduce the public investment program significantly under the low oil price scenario, this is not the case in the second half of the 1980s. A low oil price throughout the decade would require a cutback in the public investment program between 1985/86 and 1990/91 of about Rp. 13 trillion, equivalent to almost 10% of the program.

3.43 Identifying sectors where cuts might be made is not easy. For reasons argued strongly in chapter 6, it is recommended that cuts not be made in the social programs. Similarly it is important that transportation and non-oil energy investments not be reduced. The choice of cutbacks would depend upon the cause of the required cutback. For example, if the financial shortfall relates to the balance of payments, it is desirable to reduce investment in projects having a high foreign exchange content, such as the heavy industrial projects.^{/1} If, on the other hand, the constraint is due to an inadequacy of domestic saving and that, as a result, domestic monetary stability would be threatened by the proposed investment program, any reduction should be designed to reduce rupiah rather than foreign exchange expenditure. In this situation a cutback in the heavy industry

^{/1} The best solution to this problem would be to encourage foreign equity participation in these projects instead of financing them through the Government budget.

program would not be very helpful. Instead it may be necessary, for example, to delay implementation in investment in agricultural estates, the irrigation program, or other programs dependent mainly on rupiah outlays. Inevitably there tends to be a conflict here with employment objectives (see Chapter 5). Projects with high domestic expenditure tend to be those that have the most significant impact on employment. Both factors should be considered in a project-by-project review.

Conclusion

3.44 This chapter has emphasized the need for a major effort in the mobilization of domestic resources to finance an investment program that emphasizes social and physical infrastructure - both of which are essential for Indonesia's continued development in the coming decades. The principal instruments of this mobilization effort are the domestic tax system, a domestic pricing policy based upon economic costs, and a deepening and deregulation of the domestic financial system. If progress is made in these areas there is every reason to be optimistic about Indonesia's future. Under a lower oil price the argument for policies in favor of domestic resource mobilization is strengthened; in such a situation it would not be necessary to significantly reduce the investment program over the next four years, although some cutbacks would probably be desirable. If the required policy reforms are not adopted (the Low case policy), the picture is very different. In this situation the growth of investment would have to be severely curtailed. This would not only threaten economic growth in the near term but would also jeopardize the investment program in social and physical infrastructure upon which the Government has embarked and upon which Indonesia's long-term development prospects rest.

4. BALANCE OF PAYMENTS PROSPECTS AND EXTERNAL BORROWING STRATEGY

4.01 The balance of payments picture presented in this chapter is rather different - particularly for the next two or three years - from that presented in last year's report. The current account surplus, which had been projected to continue for most of the first part of the decade, has disappeared already. When cumulated over five years (1981/2 - 1985/6) the current account is now projected to be almost \$27 billion worse than projected last year. The thesis of this report is that, despite this deterioration on the external account, the momentum of development, particularly in the social and infrastructural sectors, should and can be maintained. As long as policy actions by the government are broadly consistent with the main outlines of the High policy case, continued high growth as described in Chapter 3 is considered feasible. Income and investment growth at these levels will, however, require a higher level of borrowing and will be associated with a lower level of international reserves than was previously anticipated. In last year's report, total foreign exchange reserves, both official and commercial, were projected to rise from \$11 billion to \$36 billion during the 1980/1 - 1985/6 period. In this report, reserves are projected to rise by only \$2.5 billion during the same period. Public external borrowing is now projected to account for a net inflow /1 of \$8.5 billion during the first half of the decade, compared with \$1.9 billion net inflow projected in last year's report. This chapter first describes prospects for the trade balance in the coming years and then proposes an external borrowing strategy consistent with the investment and financing program described in the previous chapter.

Prospects for the Oil Sector

4.02 Indonesia's external resource prospects are highly sensitive to international oil price developments. Every \$1 per barrel change in the nominal oil price translates, at present export levels, into a change of over \$300 million in the external resource balance. This obviously makes planning very difficult and underlines the need to maintain flexibility in the investment program and foreign borrowing strategy. The base oil price assumption (para. 3.22 and Table 3.6) has been used for the detailed projections for both High and Low policy cases presented in this chapter. However, given the extent of uncertainty involved in predicting price movements in a volatile international market, it is necessary to present an alternative assessment of the outlook that would result if prices were to fall significantly below the expected values. As in Chapter 3, a separate section will deal with this question.

4.03 As a result of record levels of exploration and secondary recovery activity undertaken in recent years, prospects for production capacity are good. Table 4.1 summarizes the expansion of exploration activity.

/1 Net of amortization and interest payments.

Table 4.1: OIL SECTOR EXPLORATION

	1977	1978	1979	1980	1981/a
Exploration wells (no.)	135	154	167	212	293
Development wells (no.)	356	366	291	490	n.a.
Seismic investigation (thousand square km)	14.4	16.6	32.4	59.0	68.8

/a Bank staff estimates.

Source: Department of Mines and Energy.

In recent months, the depressed international oil market has caused difficulties for Indonesia in selling its oil at the prevailing price. Average daily production of about 1.55 million barrels per day (mbd) for 1981/82 was 2% lower than the average 1980/81 level. For the first time in some years, Indonesia is now producing at a rate below its full capacity. This situation is likely to prevail for at least the first half of 1982/83. This means however that there will be scope for considerable expansion when international demand recovers. For projection purposes, a production of 1.45 mbd is assumed for 1982/83,^{/1} rising to 1.78 mbd in 1983/84 (still somewhat lower than the Repelita III target of 1.83 mbd). By 1990, production is assumed to have risen to 2.0 mbd. Table 4.2 summarizes production, consumption and exports under the High and Low policy cases.^{/2} Domestic consumption (and hence the exportable surplus) is quite similar under the High and Low scenarios. This is because the effects of higher domestic oil prices under the High case are roughly offset by the demand induced by higher income growth. Prospects for LNG exports remain bright, with net earnings from LNG approaching those from oil by the end of the decade.

^{/1} This is consistent with output decisions made at the emergency meeting of OPEC on 19-20th March 1982. At that meeting Indonesia agreed to cut back its production to 1.3 mbd, beginning on April 1. It is assumed that international demand will recover (and destocking will cease) in the second half of 1982. For the second half of 1982/83 a production of 1.6 mbd therefore appears reasonable.

^{/2} The projected net oil balance under the base oil price assumption is significantly different from that in last year's report owing to a downward revision in export price assumptions and slightly slower production growth in the middle of the decade. Net oil and LNG earnings are about 23% (\$4.7 billion) lower in 1985/86 than was projected last year. By 1990/91 the difference is about 20% (or about \$5.3 billion).

Detailed projections for the oil and LNG sectors are presented in Annex I Tables 4-6. Gross receipts from oil exports are projected to rise from \$15.4 billion in 1981/82 to \$25.3 billion in 1990/91, but Indonesia's dependence on oil would thus decline substantially over the decade. Whereas these earnings accounted for about 66% of total receipts from exports in 1981/82, their share would decline to only 42% by 1990/91. The relative importance of LNG would however increase from 10% of total earnings now to almost 20% by 1990/91.

Table 4.2: TRENDS IN OIL PRODUCTION, CONSUMPTION AND EXPORT RECEIPTS

	Actual		Est.	Projected		
	1979/80	1980/81	1981/82	1982/83	1985/86	1990/91
<u>Crude oil production</u> (mill bbl) (Daily rate)	576 (1.58)	576 (1.58)	566 (1.55)	529 (1.45)	688 (1.88)	730 (2.0)
<u>Domestic consumption</u> (mill bbl)/a						
High policy case				180	236	347
Low policy case	} 130	144	164	182	249	359
<u>Exportable surplus</u> (mill bbl) /b						
High policy case				349	452	383
Low policy case	} 446	429	402	347	439	371
<u>International oil price</u> (\$/bbl) (index)	22.5 (100)	32.9 (146)	35.5 (158)	35.5 (158)	45.3 (201)	69.8 (310)
<u>Net oil exports</u> (US\$ billion) /c						
High policy case				6.81	11.69	13.06
Low policy case /d	} 6.31	9.35	8.58	6.71	11.18	11.90
<u>Net LNG exports</u> (US\$ billion)	0.66	1.23	1.35	1.81	3.77	8.01

/a Crude equivalent.

/b Equal to total exports of crude and products minus imports of crude and products.

/c Total oil exports minus oil and product imports and foreign exchange costs of production and services.

/d The difference in exportable surplus is valued at refined product (import) prices, not at crude oil prices.

Source: Annex 1, Tables 4 - 6.

Outlook for Non-oil Exports

4.04 The sharp deterioration in the international economic environment and consequent slump in export earnings in the past year has underscored the importance of diversifying the range of products exported and of mounting a vigorous campaign to expand the quantity and quality of Indonesia's non-oil exports.

4.05 Export Promotion. The export promotion measures introduced by the Government in January 1982 (described in Chapter 2) are expected to provide an important stimulus to non-oil exports in the coming years. By improving the system of finance and payments for exports, the new regulations should be seen as part of a broader policy package aimed at rectifying the prevailing bias against investment in export industries. In this regard, the Government is currently exploring options for reform in other areas; these include (a) ports and shipping costs and customs procedures; (b) export marketing and quality control; (c) the extension of export incentives from final stage exporters only, to all stages of domestic production for export.

- (a) Ports and Shipping. If Indonesia is to be a successful exporter, its products must be able to compete in international markets in both price and quality. For a country which is the world's largest archipelago, this requires, inter alia, an efficient and streamlined ports and shipping system. This, in turn, implies the adoption of modern vessels and handling methods for inter-island as well as for international service. Other sources of inefficiency include outdated formalities and customs procedures not designed with fast turnaround vessels and containerized cargo in mind. At present, port turnaround is slow for a number of technical and administrative reasons. The organizational framework and the tariff structure for port services do not provide adequate incentives for efficient use of port facilities, and customs procedures are often slow and cumbersome. In addition, there is need for considerable additional investment in improved facilities and equipment. All of these factors make Indonesian exports more expensive than they need be. Important progress has been made recently in a number of these areas. For example, to improve port efficiency, the Government has announced its intention to establish a new system of port administration and accountability. Ports will be organized into "Perums" (semi-autonomous units operating on a commercial basis), rather than "Perjans" (non-commercial organizations responsible to the Government). In addition, four ports have been designated as "gateway" ports for the purpose of expediting exports and import procedures,^{/1} and the Government has embarked upon a

^{/1} Jakarta, Surabaya, Ujung Pandang and Belawan.

major program for upgrading facilities and equipment at these and other ports./1

- (b) Export Marketing and Quality Control. Many of Indonesia's exports do not have a good reputation for quality. In some cases, exports must be sold at a discount (as much as 20%) from prevailing international prices for this reason. This has been a problem for both traditional exports such as coffee, rubber and palm oil, and for modern manufactured products such as plywood. In some cases, the problem is caused by inadequate processing procedures,^{/2} and in others it is the result of poor coordination, lack of expertise in storage or processing,^{/3} or delays in shipments. Since it usually takes some years before an exporter's reputation can be changed it is important that programs are initiated now for upgrading quality and reliability. For specific agricultural products there is a need to complete work on establishing internationally recognized quality standards and then to strictly enforce these standards through appropriate Government machinery. There is also scope for a Government-sponsored extension and training program, possibly along cooperative lines for crops like coffee. In many other countries, private trading companies have played an important role in standardizing products and ensuring quality control. In the manufacturing sector the problem is not so much one of inferior quality, but of variability of specification from different sources. There is great export potential for low-cost production by small and medium-scale industry, but currently links between these suppliers and export markets are extremely weak. Trading companies, or similar institutions, could play a very important role in providing information on export markets, in encouraging standardized production and coordinating the export marketing of manufacturers.

/1 Investment masterplans are being prepared for about 15 trunk ports. This will result in great improvements in efficiency over the next few years.

/2 For example, machinery for processing coffee berries is often not available to smallholders, who therefore resort to unorthodox methods for removing the pulp from the coffee beans; these include squashing of berries under the wheels of vehicles, which often gives a high percentage of broken beans.

/3 Often products may initially be of satisfactory quality, but deteriorate due to poor storage or transportation or lack of expertise in processing.

- (c) Incentives for all Stages of Production. In any trade regime that is designed to encourage import substitution such as Indonesia's, it is desirable to provide special incentives to exporters to compensate for this bias. A major drawback of the system of compensating incentives up until now, however, has been that these incentives and preferential procedures have been directed only at final stage exporters. Intermediate stages of production have not received any particular export incentives and, as a result, backward linkages in the production for export have not been encouraged. This is being corrected with the introduction of the Government's recent package of export promotion measures which established the principle that all activities generating export value added should be treated equally, although procedures for doing this are still to be worked out. The decision to introduce a system of domestic "back-to-back" letters of credit, and a preshipment export credit insurance system, represented important elements in this regard. This, however, was only the first step. In the longer run, it is highly desirable that the entire tariff structure should be modified to reduce protection afforded to import substitution industries (with built-in safeguards to protect against dumping) and remove export disincentives. Such a move towards a more neutral trade regime would require a general reduction and harmonization of import tariffs.

4.06 Prospects for Non-oil Exports. As was discussed in Chapter 2, the performance of non-oil exports in 1981/82 was very much worse than had been anticipated. Over the longer run the outlook remains good, particularly in the light of the Government's recently renewed emphasis on export promotion. Exports of non-oil products are projected to grow by about 8% a year in real terms during the 1980s, which is somewhat lower than forecast a year ago due to lower anticipated growth in timber and coffee exports. By the end of the decade non-oil exports are now projected to be \$5 billion (16%) less than in last year's report, due partly to these lower real growth rates, but mainly to a downward revision in export price inflation and to the historical base data on manufactured exports. In last year's report, prospects were discussed in detail under the High and Low policy cases. Since, for the most part, medium and long-term prospects have not changed, a detailed discussion will not be repeated here. Table 4.3 summarizes the export outlook. More detailed projections are given in Annex 1, Table 1. The paragraphs that follow describe mainly those commodities whose outlook has changed over the last year.

Table 4.3: PROJECTED EXPORTS UNDER ALTERNATIVE CASES
(US\$ billion at current prices)

	1980/81	1981/82	High policy case			Low policy case	
			1982/83	1985/86	1990/91	1985/86	1990/91
<u>Agriculture & forestry</u>	4.06	2.85	3.74	6.85	10.75	6.05	9.34
Timber and products	1.58	0.91	1.22	2.68	4.22	2.27	3.46
Rubber	1.07	0.85	1.06	1.67	2.91	1.67	2.63
Beverages and tobacco	0.75	0.48	0.63	0.86	1.46	0.86	1.46
Other	0.68	0.46	0.83	1.37	2.16	1.25	1.79
<u>Metals and minerals</u>	0.77	0.80	1.03	1.76	3.00	1.76	3.00
<u>Manufactures</u>	0.76	0.74	0.96	2.48	10.08	1.78	5.10
<u>Total Non-oil</u>	<u>5.58</u>	<u>4.28</u>	<u>5.46</u>	<u>10.82</u>	<u>23.83</u>	<u>9.59</u>	<u>17.44</u>
<u>Oil sector (gross)</u>	<u>16.66</u>	<u>17.60</u>	<u>16.42</u>	<u>25.98</u>	<u>37.12</u>	<u>25.36</u>	<u>35.96</u>
Oil	14.64	15.42	14.24	20.14	25.32	19.52	24.16
LNG	2.02	2.18	2.18	5.84	11.80	5.84	11.80
<u>Total Exports</u>	<u>22.25</u>	<u>21.88</u>	<u>21.88</u>	<u>36.79</u>	<u>60.95</u>	<u>34.95</u>	<u>53.40</u>

Source: Bank Indonesia (1980/81 and 1981/82) and World Bank Staff estimates.
Annex I, Table 1.

4.07 As a result of strict enforcement of restrictions on exports of unprocessed timber,¹ log exports are scheduled to decline sharply to 4.5 million cu m in 1982/83, 3.0 million cu m in 1983/84 and to zero in 1985/86. This compares with about 17.0 million cu m in 1979/80 and about 11.7 million cu m in 1980/81. At the same time, plywood exports, in particular, are expected to increase rapidly. Wide differentials between domestic and international log prices resulting from restrictions on log exports, combined with other incentives granted for investment in plywood production, are expected by the Government to be sufficient to lead to a tenfold expansion

¹ The "Three Ministers" Decree of May 1980 was followed by another directive in April 1981 further restricting the export of logs. Only companies owning plywood factories are permitted to export logs and then only 20% of total production. The intention to prohibit all log exports by 1985/86 was announced in February 1982.

in plywood production and exports between 1980/81 (0.4 million cu m) and 1984/85 (3.9 million cu m). The Government policy represents a significant effort to induce greater value added and employment generation in the wood products industry, as well as to conserve valuable forest resources; but there are likely to be difficulties associated with such an ambitious plan. First, although private investment in the plywood sector has responded well to the investment incentives,^{/1} the rate of growth is likely to be less than targeted because of inadequate infrastructure (including land transportation, handling, and shipping facilities), skilled labor shortages, and managerial constraints. Second, the export target implies that Indonesia's share in total world hardwood plywood trade would rise from less than 20% in 1980/81 to 70% in 1984/85. Indonesia would therefore become by far the largest plywood exporter in the world. This target may be very difficult to achieve in so short a period, particularly in view of recent complaints about the quality of some Indonesian plywood, and the present depressed condition of the international market for plywood, which traditionally is more competitive than that for logs.^{/2} Given the nature of these supply and demand constraints it is assumed that processed timber exports will grow somewhat more slowly than the official target, while log exports are permitted to continue in the intervening period so that overall timber exports do not decline too sharply. Total timber (and products) exports by 1985/86 would be about 20% lower in real terms than in 1979/80 and would account for only about 22% of total non-oil export earnings, compared with about 32% in 1979/80.^{/3} ^{/4}

^{/1} The number of plywood mills in Indonesia rose from 21 in 1979 to 32 in 1981. The Government anticipates that this will rise to 100-125 by the end of 1983.

^{/2} There is some concern that Indonesia's timber industry may face serious difficulties in the coming years. The rapid investment in plywood factories has been on the understanding that profitability will be enhanced by a continuation of the Government's policy of ensuring domestic log prices are below international prices, by restricting log exports, and that plywood operators would maintain their privilege of exporting logs. Over the last few years Indonesian plywood mills have, on average, operated at about 50% of capacity. In the future, capacity utilization may be even lower than this as producers face difficulties marketing their product internationally. Producers may therefore require even greater subsidies to remain profitable.

^{/3} A more detailed analysis and projections are presented in "Indonesia-Timber and Wood Product Export Prospects in the 1980s", World Bank mimeo.

^{/4} The current logging policy is also seriously hindering the Government's transmigration program. In 1981/82, less than one third of the targeted 100,000 families were transmigrated. This was largely due to the reduction in target sites from 153 to 81, due to logging restrictions.

4.08 Coffee export volumes for the next four or five years are likely to be down from 1979-1981 levels despite substantial growth in production. The 28% ICO quota reduction imposed on Indonesia for 1982/83 (para. 2.05) combined with an expected 5% production growth in the same year may result in a surplus of 200,000 tons. Ninety percent of the 1.7 million estimated coffee-growers are smallholders and therefore particularly vulnerable to reduced incomes. Major efforts are underway to stimulate sales to non-ICO members./1 Palm oil exports are also likely to be significantly lower than had been earlier expected. The Government's policy of diverting exports to the domestic market to replace coconut oil has resulted in a 50% volume reduction in exports in 1981/82. In the medium term the Government envisages that exports will account for about 50% of production, but in the initial stages (through 1982/83) the percentage will be about 35%.

4.09 Fish exports are dominated by frozen shrimp exports to Japan. In recent years several national Indonesian and joint venture companies have been established to fish with modern trawlers in the Eastern parts of Indonesia. Total fish exports grew rapidly from about \$4 million in 1970 to \$78 million in 1975 and \$185 million in 1980. There is believed to be scope for significantly higher levels of sustainable marine fish production and exports, particularly in the Eastern part of the country. The waters around Java and Sumatra has been closed for some years for trawlers to protect the income sources of numerous fishing villages on the coasts of both islands. Now the Government has announced its intention to ban all trawler fishing in all Indonesian waters from the beginning of 1983, in an effort to reserve fishing grounds for small local fisherman and to prevent over fishing. This policy would cause a number of national and joint-venture companies to cease operations and would drastically reduce export revenues from this source, unless alternative arrangements can be developed to continue exploiting this export market opportunity.

4.10 Mineral exports are likely to rise substantially in the first half of the decade, partly due to the opening of the Asahan aluminum complex. Exports of aluminum will rise from about 42,000 tons (about \$85 million) in the first year of operation (1982/83) to over 200,000 tons (about \$500 million in current prices) by 1984/85.

4.11 The performance of manufactured exports has been disappointing in 1980/81 and 1981/82, having declined in real terms in both years. This should not, however, be interpreted as a permanent trend. These two poor

/1 In 1980/81, 76,000 tons were exported to non-ICO countries, about a quarter of total exports. It is hoped that this may be raised to over 100,000 in 1982/83, although competition is currently strong in non-ICO markets.

years followed a remarkable increase of over 100% in manufactured exports in 1979/80, which had been caused by depressed domestic demand and increased competitiveness following the November 1978 devaluation, the introduction of the Export Certificate Scheme, and the opening of a number of export-oriented production facilities (notably garments, fertilizer and cement). In the following two years, domestic demand has expanded more rapidly than production, international demand has been sluggish, and export incentives have been reduced in some areas./1

4.12 The volume of manufactured exports from developing countries as a whole grew annually by about 10% in the 1970s and, although this is expected to fall to about 8% in the present decade, there is no reason why, given the low base, Indonesia's manufactured exports should not grow at almost double that rate. This expansion can be expected to come from continued high growth of small and medium-scale enterprises (see Chapter 5) and from large resource-based (mainly public and joint venture) projects in sectors such as fertilizer and petro-chemicals. This is not to imply that high export growth is guaranteed, or even easy. Policy changes will be necessary and the Government has already made important progress in this area (see para. 4.05). Specifically, high growth requires movement towards a more neutral trade policy regime, reversing the present pattern of import-substitution biased trade policy. Other countries' experience suggests that, under the latter, typically, less than 10% of the growth of the industrial sector is accounted for by manufactured export expansion whereas, with more outward-looking trade and development policies, manufactured exports growth and industrial growth are highly inter-related and the former can account for as much as 50% or more of the total increase in output. For Indonesia, this high percentage is probably unrealistic, but there is little doubt that, under a different incentive system, the growth of manufactured exports could be much higher than at present. Under a trade regime characterized by high protection favoring production for the domestic market, the typical sequence is that high growth of the industrial sector can be sustained as long as the limits to easy import substitution are not reached. Once it is reached - and Indonesia appears to be reaching that point now - growth tends to decelerate rapidly to a rate determined by the expansion of domestic demand, whereas under more outward looking trade policy, the development of manufactured exports provides an important source of growth in demand, utilizing the comparative advantage of the country./2 These issues underlie the difference between the High and Low policy cases.

/1 For example at the beginning of 1981 export rebates for garments through the Export Certificate Scheme were lowered from 30-40% to 15-19%. This, combined with an appreciating rupiah viz-a-viz European currencies, made exporting less profitable.

/2 For a discussion of these issues, see H.B. Chenery, "Interaction Between Industrialization and Exports," American Economic Review, May 1980, and World Bank: On Exports and Economic Growth; Staff Working Paper 508, February 1982.

4.13 Exports of Services. In the Government's current emphasis on export promotion, it is aware of the scope for expanding the export of services. Within an appropriate policy environment, there are two sectors in particular that can be expected to make a growing contribution to foreign exchange earnings in the coming years. These are tourism and the export of labor. In 1981 about 600,000 foreign visitors (including tourists and other visitors) each spent an average of 7-10 days in Indonesia; this generated about \$300 million in foreign exchange. Since 1976, the total number of foreign visitors has risen at an average rate of about 8%; the growth rate of tourism has been somewhat less than that. The development of tourism in the latter part of the 1970s was disappointing when compared with earlier expectations. While this was partly due to slower than anticipated income growth in OECD countries,^{/1} it was also due to a Government policy that did not give tourist development a high priority. For example, in an effort to develop the national airline, Garuda, air access to Bali has been severely restricted.^{/2} Except for visitors from Australia, all tourists must first pass through Jakarta. This policy has been detrimental to the Bali tourist industry. If a more aggressive tourist promotion strategy were adopted, the number of foreign visitors could probably grow at an annual rate of about 10% throughout the decade. In that case, by 1990, about 1.4 million foreigners would be visiting Indonesia annually, contributing over \$1.5 billion (gross) to service earnings. This is equivalent to about 7% of projected non-oil exports.^{/3}

4.14 Remittances of Indonesian workers abroad have traditionally not been a very significant source of foreign exchange. Data are very poor in this area, but earnings from emigrant remittances probably amount to only about \$15 million annually, well under 1% of non-oil exports. This is in sharp contrast to South Asia where this source of earnings contributes about \$2 billion annually, equivalent to about one-fifth of merchandise exports. The Government has made efforts to capture a share of earnings from the construction boom in the Middle East; in 1980/81 there were about 3 million foreign workers in the Middle East, of which Indonesia's share was about 10,000. If judged against the goal of earning foreign exchange, Indonesia's

^{/1} It was apparently not due to higher than anticipated air fares. Currently, tourist fares to Indonesia from the United States, Japan, Australia and Europe are lower in real terms than in 1972.

^{/2} Currently there are only 12 direct international flights to Bali per week, all of them from Australia.

^{/3} This would make tourism Indonesia's third largest non-oil export (after timber products and rubber). Of course part of the expenditure of tourists would be on imported goods or components, and therefore the net earnings from tourism would be lower than this figure.

venture into the Middle East construction market has not been very successful so far. This is partly because Indonesian labor has been linked with Government-sponsored construction companies, which have generally operated at high cost and low profitability. Currently Indonesia's comparative advantage lies in providing unskilled labor rather than in the management skills required to operate a large construction company on a foreign contract. Other East Asian countries, notably the Philippines, have successfully "exported" large groups of unskilled labor, managed by foreign construction companies. With greater emphasis on labor exports, foreign remittances could play a more significant role in the overall balance of payments in the coming years. In this regard, a target of 150,000 Indonesian workers abroad would appear reasonable for the end of the decade. This would generate earnings of about \$500 million in 1990, equivalent to over 2% of non-oil export earnings.

Import Policies and Projections

4.15 Import growth will be determined by the rate of growth in investment and income, and by the nature of structural changes in production that take place. This is not the time to consider restricting imports through the use of quantitative restrictions or higher tariffs. Such a policy would run the risk of severely jeopardizing economic growth prospects in general and manufactured export growth in particular; it would foster inefficiency and would create inflationary pressures in the economy resulting in reduced investor confidence and a loss of international competitiveness. Table 4.4 summarizes projected imports under the alternative policy cases.

Table 4.4: PROJECTED IMPORTS UNDER ALTERNATIVE CASES
(US\$ billion at current prices)

	1980/81	1981/82	High policy case			Low policy case	
			1982/83	1985/86	1990/91	1985/86	1990/91
Consumer goods	2.89	2.89	2.98	4.48	8.92	4.46	7.66
Intermediate goods	3.56	4.46	4.75	7.10	12.70	6.83	11.64
Capital goods	5.34	7.15	8.65	14.83	25.04	13.66	23.32
<u>Total non-oil imports</u>	<u>11.79</u>	<u>14.51</u>	<u>16.38</u>	<u>26.40</u>	<u>46.66</u>	<u>24.95</u>	<u>42.62</u>
Oil sector imports	5.88	7.66	8.32	10.00	16.05	10.21	16.05
<u>Total imports</u>	<u>17.67</u>	<u>22.17</u>	<u>25.81</u>	<u>36.40</u>	<u>62.71</u>	<u>35.16</u>	<u>58.67</u>

Source: Bank Staff Estimates.

4.16 The trend of increasing import intensity of investment which has occurred over the last decade,^{/1} is expected to continue until about 1984/85, when capital goods imports as a percentage of gross domestic investment are projected to reach about 42%.^{/2} During this period, capital goods imports can be expected to grow in real terms by about 13-15% annually. Thereafter, the import intensity is projected to fall as foreign exchange availability becomes a constraint and as the capacity of the domestic capital goods industry expands.^{/3} Coupled with a reduction in the overall growth in investment,^{/4} this is likely to result in a slowdown in the growth of capital goods import growth to about 6% p.a.

4.17 Imports of intermediate goods are expected to rise in real terms by 7-8% in the first half of the decade. Thereafter, as additional domestic investments in intermediate products (e.g., paper, petrochemicals, fertilizer) begin production, growth is expected to slow down to about 5% p.a.^{/5} Currently, Indonesia's trade regime still favors final goods production, while low (and sometimes negative) effective protection is afforded to the production of intermediate inputs. Backward linkages are therefore not encouraged while intermediate imports are. Under the High policy case it is assumed that this bias will be gradually remedied and import growth will thus be reduced.

4.18 Prospects for rice imports must be re-examined in the light of the major production gains over the last two years (para. 6.60). Imports fell

^{/1} This trend was inevitable, given the expansion of investment and the small size of the domestic capital goods industry, particularly when coupled with relative foreign exchange abundance.

^{/2} Compared with 34% in 1980/81 and an estimated 37% in 1981/82.

^{/3} For an analysis of prospects for the capital goods industry, see World Bank: Indonesia, Development Prospects for the Engineering Industries, draft, 1982.

^{/4} In Chapter 3, it was suggested (para. 3.07) that this reduction in investment is consistent with the maintenance of a high (7.5% p.a.) growth in national product under the High policy case, due to a slight decline in the incremental capital output ratio. For these projections the 1990 ICOR and import intensity of investment are about the same as they were in 1980. Both are therefore expected to first rise and then fall during the decade.

^{/5} During much of the 1970s intermediate goods imports actually declined in real terms following investments particularly in cement and fertilizer.

from 1.9 and 2.1 million in 1979 and 1980 respectively to about 600,000 tons in 1981. Given the high current stock levels ^{/1} and projected production, it is unlikely that more than about 500,000 tons will be required in 1982/83. Over the decade as a whole a deficit of about a million tons a year appears to be the most plausible assumption.^{/2} Projections of rice production are, however, fraught with all kinds of difficulties. There is little doubt that wheat imports will continue to expand rapidly. Imports of 2.0 million tons are projected for 1990 up from 1.4 million tons in 1981. Imports of other consumer goods, which grew at an average annual rate of about 8.0% between 1973 and 1981 are projected under the High policy case to continue to grow in line with the 6% growth in overall consumption.

4.19 After taking account of these projected trends in exports and imports, the resource deficit is projected under the High case to rise to \$3.9 billion in 1982/83, to fall to \$1.4 billion in 1985/86, and thereafter to rise to \$5.0 billion by 1990/91 (Table 4.5). Experience in developing countries suggests that a resource gap of 2-3% of GDP is sustainable in the long-run. In this context, under the High policy case the resource gap in 1985/86 and 1990/91 remains manageable at about 0.9% and 1.4% of projected GDP respectively. Most of the rest of this chapter is devoted to analysis of the appropriate external financing strategy in the light of the resource gap projected under the High policy case. However, given the high degree of uncertainty in making these projections, it is first necessary to explore the sensitivity of the conclusions to two key assumptions.

^{/1} Stocks of rice held by BULOG rose from 0.8 million tons at end 1979 to 1.7 million tons at end 1980 and were estimated to be 2.3 million tons at end 1981.

^{/2} For a detailed analysis of recent production gains and of prospects for the decade ahead see World Bank: Policy Options and Strategies for Major Food Crops; 1982, forthcoming.

Table 4.5: THE RESOURCE BALANCE
(US\$ billion at current prices)

	1980/81	1981/82	1982/83	1985/86	1990/91
<u>Exports</u>					
High policy case }				36.79	60.95
Low policy case }	22.25	21.88	21.88	34.95	53.40
<u>Imports</u>					
High policy case }				36.41	62.71
Low policy case }	17.68	22.17	24.71	35.16	58.67
<u>Non factor services (net)</u>					
High policy case }				-1.78	-3.19
Low policy case }	-0.97	-0.97	-1.10	-1.98	-3.79
<u>Resource balance</u>					
High policy case }				-1.40	-4.95
Low policy case }	3.60	-0.76	-3.92	-2.19	-9.06

Source: Bank Staff Estimates: See Annex 1, Table 3.

Uncertainties in the Analysis

4.20 The foregoing analysis is based on the High policy case and base oil price assumption. The actual outcome for the balance of payments may differ for a variety of reasons, including, in particular, slower than anticipated progress in implementing the policies in the High case, a slower recovery in non-oil exports, and lower than anticipated oil prices. In Chapter 3, the impacts of uncertainties on the domestic resource mobilization effort was examined and it was concluded that under the Low policy case it would be necessary to cut back the development program, which would in turn cause a slowdown in economic growth. Under the low oil price scenario it was suggested that only minor cutbacks in the investment program would be needed over the next four years, but that if lower oil prices persisted throughout the decade, a substantial cut-back may be required after 1985. These conclusions are supported by the following discussion of the consequences of lower oil prices, or a policy outcome akin to that in the Low case, for the balance of payments.

4.21 The Low Policy Case. Both exports and imports would be lower under the Low than the High policy case, particularly in the second half of the decade. Capital goods imports would be reduced both because incentives

for private sector investment would be lowered and because the public investment program would have to be cut-back due to foreign exchange shortages. Reduced investment would in turn lead to lower import growth of consumption and intermediate goods. Even with slower import growth, however, the resource balance rises to \$2 billion (1.4% of GDP) in 1985/86 and \$9 billion (4.2% of GDP) by 1990/91. Deficits of these magnitudes could not be financed over the long run while at the same time maintaining external financial stability. If it is assumed that capital inflows are the same as recommended under the High case later in this chapter, foreign exchange reserves would fall to imprudent levels (1.7 months of imports by 1990). At the same time, the debt service ratio would rise continually throughout the second half of the decade and would exceed 25% in 1990. In fact, it is unlikely that Indonesia would continue to enjoy such favorable access to the private capital markets, causing the debt service ratio to rise even further. A comparison of the High and Low balance of payments outcomes is presented in Annex I, Table 8.

4.22 Impact of Low Oil Price on High Policy Case. As noted in Chapter 3 it is assumed that under the low oil price scenario, crude oil prices fall to \$30.5 per barrel in 1982/83 and thereafter remain constant in real terms. The price of LNG is assumed to behave in a similar manner. Table 4.6 summarizes the effect of this on net oil and LNG exports and on the resource balance. The Table indicates that the resource deficit in 1982/83 would rise by almost \$2 billion to \$5.2 billion, and would range between \$4 billion and \$5 billion for the next three years. The cumulative difference in the resource balance resulting from the lower oil price for the four years 1982/83 - 1985/86 is slightly under \$10 billion. This is equivalent to about 1.7% of total GDP for the same period.

Table 4.6: SENSITIVITY OF THE RESOURCE BALANCE (HIGH POLICY CASE)
TO THE OIL PRICE
(US\$ billion at current prices)

	1982/83	1983/84	1984/85	1985/86
<u>Crude Oil Price (\$/bbl)</u>				
Base oil price	35.5	38.3	41.8	45.3
Low oil price	30.5	33.0	36.0	39.0
<u>Oil Sector Exports (net)</u>				
Base oil price	8.3	12.3	14.3	16.0
Low oil price	6.6	10.1	11.7	12.9
<u>Resource Balance</u>				
Base oil price	-3.5	-1.9	-2.0	-1.4
Low oil price	-5.2	-4.1	-4.6	-4.5
<u>Resource Balance as</u>				
<u>% of GDP</u>				
Base oil price	3.6	1.6	1.4	0.9
Low oil price	5.3	3.5	3.3	2.8

Source: Bank Staff Estimates: See Annex 1, Table 9.

4.23 Deficits of this magnitude would definitely be at the upper limits of what Indonesia could reasonably expect to handle within the bounds of internal and external financial stability. In this example, it would require a substantially larger borrowing program in the Eurodollar market, together with a slower rate of reserve accumulation throughout the decade. The burden of debt service would necessarily rise but it would still be within acceptable limits. However, faced with a much tighter external resource position, Indonesia would have to make a careful re-examination of its prospects for expanding non-oil exports even further, perhaps in combination with a somewhat slower growth in imports. If adjustments in the latter were needed, the cuts would have to concentrate on capital goods imports for lower priority investment projects, and on non-essential consumer goods imports, thereby minimizing the disruptions to production and employment growth that would inevitably come from any reductions in imports of intermediate goods.

Policy Towards External Capital Inflows

4.24 The Projected Financing Requirements. The review of the public investment program in Chapter 3, and the prospects for the resource balance analyzed earlier in this chapter, provide a framework to consider Indonesia's external borrowing needs. The balance of payments outlook under the High policy case is presented in Table 4.7. Over the next four years (1982/83 - 1985/86) current account deficits are projected to amount to about \$13 billion, equivalent to 2.7% of GDP. In the second half of the decade the deficits on current account are expected to continue at fairly high levels, but to decline as a percentage of GDP - to an average of 2.2%. As Table 4.8 indicates, Indonesia will require some \$25 billion to cover the current account deficit net of interest payments and official transfers during the 1980s as a whole. Interest and amortization payments will add \$45 billion, and a further \$7 billion will be needed to ensure reserves remain at 3 - 4 months of imports. Thus, total foreign exchange requirements to be financed through official grants, private direct investment, medium and long term loans and other capital are projected to be about \$76 billion, of which \$23 billion will be needed in the first half of the decade. In the light of Indonesia's strong external borrowing capacity and continued good medium term prospects, deficits are expected to be well within manageable limits. This conclusion is based on the assumption that the Government pursues policies consistent with the High policy case and that the base oil price will prevail.

Table 4.7: BALANCE OF PAYMENTS PROJECTION UNDER THE HIGH POLICY CASE
(US\$ billion at current prices)

	1981/82	1982/83	1983/84	1985/86	1990/91
Resource balance	-1.3	-3.9	-1.8	-1.4	-5.0
Factor services	-1.2	-0.6	-1.0	-1.7	-3.9
Interest on public debt	-0.9	-1.1	-1.3	-1.8	-3.4
Other (net)	-0.3	0.5	0.3	0.1	-0.5
Official transfers	0.1	0.1	0.1	0.1	0.1
Current account	-2.5	-4.4	-2.7	-3.0	-8.8
Public medium and long term					
loans (net)	2.7	2.6	2.9	3.6	6.2
Disbursements	3.9	4.0	4.5	5.8	11.11
Amortization	-1.2	-1.4	-1.6	-2.2	-4.9
Private direct investment	0.2	0.2	0.4	0.6	1.0
Other capital (net)	-1.3	0.5	0.8	0.7	2.0
Change in reserves					
(- = increase)	0.8	1.1	-1.4	-1.9	-0.4
<u>Memo Items</u>					
Net official reserves	6.5	5.4	6.8	10.1	13.2
Official reserves in months					
of non-oil imports	5.0	3.7	3.8	4.3	3.2
Banking system reserves <u>/a</u>					
in months of non-oil					
imports	8.3	6.2	5.6	5.6	4.4
Debt service ratio (%) <u>/b</u>	15.0	18.1	14.7	15.0	18.5
Current account deficit					
as % of GDP	3.0	4.4	2.3	1.8	2.5

/a Includes official reserves and net foreign assets of commercial banks.

/b Ratio of debt service payment for public and private external debt to exports (with oil and LNG on a net basis).

Source: Bank Indonesia (1981/82) and World Bank Staff estimates. Annex 1, Table 3.

**Table 4.8: SUMMARY OF FOREIGN EXCHANGE REQUIREMENTS
AND SOURCES, 1982/83 - 1990/91: HIGH POLICY CASE
(US\$ billion at current prices)**

	1982/83-1985/86	1986/87-1990/91
<u>Foreign Exchange Requirements</u>		
Current account deficit		
excluding interest on public debt and official transfers	7.1	18.6
Interest on debt	5.7	13.6
Amortization	7.0	18.3
Increase in reserves	3.6	3.1
<u>Total</u>	<u>23.4</u>	<u>53.6</u>
<u>Foreign Exchange Availabilities</u>		
Direct foreign investment (net)	1.6	4.0
Official grants (net)	0.4	0.5
Medium & long term loans (gross)	19.4	42.5
Concessional	(3.2)	(2.2)
Official non-concessional	(5.9)	(15.1)
Private	(10.3)	(25.2)
Other capital (net)	2.0	6.5
<u>Total</u>	<u>23.4</u>	<u>53.6</u>
<u>Memo Items</u>		
Medium & long term loans (gross)	19.4	42.5
From pipeline already committed at end 1981	7.0	0.6
From new borrowing	12.4	41.9

Source: Bank Staff Estimates, from Tables 4.7, 4.9, 4.10 and Annex 1.

4.25 Over the next four years it is estimated that net disbursements of public debt must be in the range of \$12.5 billion. Given the Government's debt repayment obligations, this will require gross disbursements of about \$19.5 billion. Of this amount, almost \$7 billion can be expected from loans already committed, leaving a requirement of \$12.5 billion from new borrowing. On the basis of anticipated disbursement schedules this is equivalent to a new commitment requirement of almost \$21 billion, or an annual average of just over \$5 billion. In the sections that follow consideration is given to the probable sources of these funds. Prospects for official and private inflows are discussed separately.

4.26 Official new commitments of total external public debt have averaged about \$4 billion over the past three years (1979-1981). Of this amount, nearly half has been in the form of official development assistance (ODA) from multilateral and bilateral concessional sources. After rising steadily throughout the second half of the 1970s, concessional lending has fallen from a high of \$1,381 million in 1979 (32% of total borrowing) to only \$488 million (12% of total borrowing) in 1981. The sharp drop in concessional loans during 1981 (see Table 4.9) was partly due to delays in the signing of loan agreements.^{/1} Several concessional loan agreements that were originally scheduled for 1981 were, in fact, signed during the first part of 1982. The 1981 level of new loan commitments at highly concessional rates therefore tends to understate the current degree of support among donors for Indonesia's development programs. However, in view of the present political and economic climate in many of the donor countries and the pressing needs of low income recipient countries especially in Africa, it is unlikely that concessional flows to Indonesia will rise significantly in the coming years. For 1982/83 new commitments of ODA (from bilateral and multilateral sources) of \$1.85 billion are required. These are likely to rise slightly to about \$2.1 billion by 1985/86. As a proportion of total loan commitments ODA would fall from almost half in 1979-81 to about one third in 1985/86.

Table 4.9: NEW COMMITMENTS OF EXTERNAL PUBLIC DEBT BY SOURCE 1976-81/a
(US\$ millions)

	1976	1977	1978	1979	1980	1981
Official Dev. Assistance	<u>1,176</u>	<u>1,246</u>	<u>1,523</u>	<u>2,344</u>	<u>1,944</u>	<u>1,663</u>
Multilateral	673	542	750	1,077	1,019	1,175
Bilateral concessional	503	704	773	1,267	925	488
Total concessional	(503)	(704)	(916)	(1,381)	(1,087)	(488)
Commercial Loans	<u>1,957</u>	<u>474</u>	<u>1,765</u>	<u>1,970</u>	<u>1,809</u>	<u>2,433</u>
Official Bilateral at						
Market Terms	522	90	27	87	325	298
Suppliers and Buyers						
Credit (fixed rate)	612	107	345	1,047	387	1,390
Floating Rate Loans	823	282	1,295	773	1,052	700
Bonds	-	-	98	63	45	45
<u>Total Commitments</u>	<u>3,133</u>	<u>1,720</u>	<u>3,288</u>	<u>4,314</u>	<u>3,753</u>	<u>4,097</u>

^{/a} Valued at average exchange rates prevailing in the year. All data are as reported by April 1981.

Source: External Debt Division, World Bank. Data provided by Bank Indonesia.

^{/1} In Table 4.9 and all other tables containing information on external borrowing, loan commitments refer to the actual signing of loan agreements and not to pledges or similar indications of intentions.

4.27 Despite the declining trend in the relative importance of concessional lending to Indonesia, it is desirable that the share of total official lending (which includes official export credits as well as ODA), should not decline.^{/1} Indonesia's external public debt is well structured with a good proportion of total debt with long maturity and fixed interest rates. It is important that this be maintained. New commitments from official sources amounting to about 45% of total new commitments (or about \$10 billion) over the next four years would be needed to ensure this continued good maturity structure. This would require an expansion of commitments from official sources from the current level of about \$2.0 billion to about \$2.7 billion in 1985.

Table 4.10: PROJECTED NEW COMMITMENTS OF PUBLIC DEBT BY SOURCE
(US\$ million at current prices)

	1982/83	1983/84	1984/85	1985/86	1982/83-85/86
Official Development Assistance <u>/a</u>	1,805	1,950	2,030	2,130	7,960
Commercial Loans	2,300	2,900	3,520	4,230	12,950
Official loans at market terms, buyers and suppliers credits	1,500	1,900	2,370	2,880	8,650
Floating Rate Loans and Bonds	800	1,000	1,150	1,350	4,300
<u>Total</u>	<u>4,150</u>	<u>4,850</u>	<u>5,550</u>	<u>6,360</u>	<u>20,910</u>

/a Includes bilateral concessional and multilateral sources.

Source: World Bank staff projections.

/1 In this connection it is worth stressing that while non-concessional ODA has traditionally been distinguished in the presentation of information on loan commitments from non-concessional bilateral loans from official sources (mostly export/import banks), for economic analytical purposes they should be grouped together into one category. Non-concessional lending from official bilateral sources - currently about \$300 million p.a. - is relatively low by international standards. It is projected to rise to over \$700 million p.a. by the middle of the decade. In Table 4.10 these commitments have been grouped together with fixed rate suppliers and buyers credit.

4.28 In last year's report, when the availability of foreign exchange was not anticipated to be a major constraint on Indonesia's development during the first half of the decade, it was argued that continued official lending to Indonesia was highly desirable on grounds of the technical assistance and technology transfer embodied in the financial flows. These arguments remain equally valid. Donors in general, and IGGI members in particular, have, over the years, developed a stock of knowledge in designing projects and programs in specific sectors in Indonesia; they have been closely associated with the implementing agencies and have a commitment to support development efforts that goes beyond the financial transfers. Donors have a crucial role to play in assisting the Government in implementing the program of structural transformation on which it has embarked. Three areas of particular priority are suggested in this regard. These are: (a) the development of human resources in Indonesia through education, manpower training, health, nutrition, water supply and shelter, (the theme of Part II of this report); (b) the expansion of physical infrastructure, notably in transportation and electric power, the inadequacy of which currently constitutes a major constraint on continued growth (see para. 3.13); and (c) investment in programs and projects designed to increase employment (Chapter 5).

4.29 Public Borrowing from Commercial Sources. The balance of the loan requirements will have to come from non-official, commercial sources. Over the last three years (1979-1981), the Government has borrowed \$5.7 billion from these sources, equivalent to 47% of all public borrowing. In view of the likely availability of funds from official sources, borrowing from commercial sources is projected to account for slightly over half of total borrowing (or \$11 billion) over the next four years.

4.30 As shown in Tables 4.9 and 4.10, there are four non-official sources of foreign borrowing for the Indonesian Government: suppliers credits; fixed rate, insured commercial bank (or buyers) credits;^{/1} floating rate (usually syndicated) bank borrowing; and the international bond markets. Due to good financial management, the Indonesian Government has, over recent years, achieved ready access to these private capital markets. Project financing by this means was used extensively during the second half of the 1970s; individual packages were well structured with borrowing generally only for specific capital goods imports. Financial credits for free foreign exchange, typically around 15% of the foreign exchange cost of a project, were obtained only to the extent required by the project structure - usually for downpayments on capital goods or for the Government's equity in a project. Initially, projects were financed on a "tailormade" basis, but in the past few years, the free foreign exchange component has been "unbundled". Projections of required free foreign exchange have been translated into large placements in the Euro-currency

^{/1} This form of borrowing is linked to specific imports. Generally, it is insured by an official institution in the supplying country.

markets. As a result, better terms have been obtained and administrative and management fees have been minimized. Market management has been active; high-cost loans have been consolidated, prepaid and refinanced on better terms. Bond placements have also been handled skilfully, not so much to raise large amounts of funds but to establish Indonesia's name in the markets and, by reinforcing its position as a prime borrower, to lower spreads on bank credits.

4.31 In the coming years, the composition of commercial borrowing is also expected to change. Floating rate syndicated (or "Jumbo") loans offer the greatest scope for raising new funds rapidly. Indonesia is now regarded as highly creditworthy in the international banking community and has successfully made large placements in the Euro-currency markets at competitive interest rates. For example, in October 1981, the Government obtained a \$300 million commercially syndicated loan, with a ten-year maturity and interest of only 3/8 over LIBOR. A similar loan was negotiated in the second quarter of 1982. Indonesia can expect to enjoy good access to these markets for the foreseeable future. Table 4.10 projects that \$4.0 billion will be raised from the Eurodollar markets in the period 1982/83 - 1985/86. This is equivalent to two or three large (\$300 - \$500 million) placements each year. This is a fairly conservative estimate and there is likely to be opportunity for increasing these amounts should the need arise. This flexibility is important, particularly in the light of the uncertainty concerning developments in the international oil market (para. 4.23).

4.32 Non-Guaranteed Private Capital. Private non-guaranteed external borrowing already plays a significant role in the overall structure of external liabilities, although it has received little attention. Currently, it is unmeasured and uncontrolled. While there is no case for restricting private capital flows, there would be considerable value to economic policy-making from improved monitoring of these inflows and outflows. In the projections, it is assumed that the net transfer on the private account (borrowing minus debt service) will be zero.

4.33 The other element of private capital inflows is private direct investment. After reaching a peak of about \$0.5 billion in 1974/75, net inflows of recorded private foreign investment have declined steadily. In real terms, the decline has been even sharper. Increased inflows of private foreign investment are important, not only for financing overall investment, but also in transferring much needed managerial skills and technology in sectors such as manufacturing, mining and tree crops. In this context, the decline in net inflows of private investment is of some concern. However, Indonesia remains a potentially attractive country for foreign investors, and the adoption of less restrictive and uncertain tax, licensing and ownership regulations is likely to induce increased flows of private foreign investment. Under the High case, it is assumed that the net annual inflows would reach about \$1 billion by 1990/91. In real terms, this would be only slightly higher than the level recorded in 1974/75, but would represent a 200% real increase over the low levels recorded at the end of the 1970s and early 1980s. A good proportion of this amount could be

expected to be in the large resource-based investments that have traditionally been the domain of the public sector. In Chapter 3 it was emphasized that increased equity participation in these projects would be required to ease constraints (para. 3.32). Table 4.7 suggests that it would also be highly desirable from a balance of payments standpoint.

Foreign Exchange Reserves and Debt Management

4.34 Indonesia now (end March 1982) holds official foreign exchange reserves of about \$6.5 billion, equivalent to about five months of non-oil imports. In addition, state-owned commercial banks hold \$4.2 billion. During 1981/82, official reserves fell (by \$0.8 billion) for the first time since 1975/76. Official reserves are projected to decline further (by about \$1.0 billion) in 1982/83, to the equivalent of about 3.7 months of non-oil imports. This decline is not a cause for alarm; a run down of reserves is entirely appropriate given that the decline in export earnings is expected to be temporary and given the nature of Indonesia's development effort (see Chapter 3). The Government has earned the option of using its accumulated reserves in this way by skilful and prudent foreign exchange management over the last three years. In this regard Indonesia stands in sharp contrast to a number of other oil exporting countries.

4.35 With the projected recovery in export receipts in 1982-84, reserve accumulation would resume in 1983/84. Official reserves are therefore projected (Table 4.7) to remain at an average level equivalent to about 4 months of non-oil imports through the next four years. This is higher than the average for developing countries. When foreign exchange holdings of commercial banks are added, import coverage remains roughly constant at 5 months. During the second half of the decade reserves are projected to rise proportionally with imports, so that official reserves and total reserves (including commercial banks) average about 3.5 and 4.5 months of imports respectively.

4.36 At the beginning of 1982, public and publicly guaranteed disbursed and outstanding debt was \$15.7 billion;^{/1} including undisbursed loans, it was \$26.8 billion. There was an estimated additional \$3.6 billion of private unguaranteed debt. Under the projections presented above, disbursed outstanding public debt would rise to almost \$30 billion in 1985/86.^{/2} Private

^{/1} Estimate provided by Bank Indonesia, converted at end 1981 exchange rates. 1981 transactions data have not yet been fed into the World Bank Debt Reporting System.

^{/2} The implied real rate of growth is about 7.8% p.a. The real rate of growth of external borrowing by all developing countries (under High case scenario assumptions of the World Development Report, 1981) is projected to be lower at about 6.0% p.a. Taking into account the investment and trade financing needs of Indonesia, as well as its capacity to service external debt, the faster than average rate of growth of external borrowing appears realistic.

non-guaranteed debt would increase to \$5.5 billion in 1985/86. While at the end of 1980, over 50% of disbursed outstanding public debt was at concessional rates and over 50% was from official bilateral sources, it is projected that by the latter part of the decade, these percentages will have fallen to 31% and 36% respectively. Table 4.11 summarizes this anticipated change in the structure of public debt.

4.37 Service payments on Indonesia's public debt amounted to almost \$2.5 billion in 1981/82. As a percentage of exports, service payments rose from 11% in 1980/81 to 15% in 1981/82, due more to the decline in exports than to the increase in debt service obligations. Based on the volume and pattern of existing debt and the borrowing recommended above, the debt service ratio is projected to rise to 18% in 1982/83 and thereafter to fall to 15% for the next three years. In the second half of the decade the ratio rises gradually to 18.5% by 1990/91./1

Table 4.11: COMPOSITION OF PUBLIC DEBT
(as % of total debt)

	<u>Beginning 1982</u>		<u>1990</u>
	<u>Disbursed only</u>	<u>Including Undisbursed</u>	<u>Disbursed only</u>
Bilateral loans	50	43	} 58
Multilateral loans	14	23	}
Suppliers credits	9	8	3
Financial institutions /a	27	26	39
<u>Total</u>	<u>100</u>	<u>100</u>	<u>100</u>
Non-concessional loans	50	57	69
Concessional loans	50	43	31
<u>Total</u>	<u>100</u>	<u>100</u>	<u>100</u>

/a Includes bonds, and fixed rate "buyers" credits as well as floating rate commercial loans.

Source: World Bank Debtor Reporting System and Bank Staff estimates.

/1 These calculations are based on the following assumed real interest rates: suppliers' and buyer's credits and bilateral non-concessional, 0%; multilateral, 2%; financial credits, 4%.

Table 4.12: SELECTED PUBLIC DEBT INDICATORS FOR INDONESIA
AND COMPARATOR COUNTRIES

	Indonesia	Egypt	India	Korea	Turkey
Public debt outstanding, 1980 (\$ b)	14.9	13.1	17.2	16.3	14.0
Debt service ratio, 1980 (%) <u>/a</u>	8.0	18.9	9.5 <u>/b</u>	12.3	11.6
<u>Percentage of Debt</u>					
From official sources					
Average 1970-72	86	69	96	42	94
Average 1978-80	64	84	98	41	70
On concessional terms					
Average 1970-72	81	52	85	36	84
Average 1978-80	52	75	92	19	38
At variable interest rates					
Average 1970-72	1	-	-	4	1
Average 1978-80	16	5	-	28	23
<u>Percentage of New Commitments</u>					
From official sources					
Average 1970-72	72	51	95	55	92
Average 1978-80	54	57	97	35	53
On concessional terms					
Average 1970-72	71	38	89	34	58
Average 1978-80	31	49	76	4	23
At variable interest rates					
Average 1970-72	3	-	-	10	-
Average 1978-80	28	7	1	46	42 <u>/c</u>

/a On basis of gross exports of goods and services.

/b 1979 figure.

/c Figures for Turkey reflect large amounts of rescheduled debt at variable rates rather than a change in the source of funds. Without rescheduling, this figure would have been 3%.

Source: World Bank Debtor Reporting System.

Note: These figures refer only to public and publicly guaranteed debt.

4.38 The changing structure of external borrowing anticipated for the coming years is part of a longer term process that has been underway over the last decade; it reflects Indonesia's financial maturation as well as political and economic changes in donor or source countries. Three major

changes have characterized the development of the debt structure since the early 1970s. These are a decline in the share of debt (a) from official sources, (b) on concessional terms, and (c) at fixed rates of interest. Most countries similar to Indonesia have also undergone this same kind of transition, but few as rapidly or radically as Indonesia. Table 4.12 contrasts Indonesia's experience with several comparator countries. The figures in the table underline the distance that Indonesia has progressed from a country that, in 1970, was almost totally dependent on official flows on concessional terms to one that is becoming increasingly integrated into the global financial system.

4.39 This successful transformation has been made possible by excellent debt management by the Indonesian Government since the mid-1970s. By paying careful attention to the maturity structure and to the proportion of debt at floating terms, the monetary authorities have orchestrated this structural shift without economic disruption. An important responsibility of the IGGI is to ensure that adequate funds with long maturities and fixed interest rates continue to be available.

PART II: HUMAN DEVELOPMENT - ISSUES AND POLICIES

Central to an improved quality of life and the development of human resources to their full potential are increased incomes and access to productive employment opportunities. Chapter 5 describes recent trends in population and employment and assesses the scope for productively assimilating the 19 million new entrants into the labor force expected during the 1980s. It concludes that continued rapid economic growth, coupled with a number of policy reforms, is absolutely essential if there is to be any hope of raising real earnings of the poorer groups of the population.

However, while rapid economic growth is necessary, it is not sufficient, and Indonesia's development is still characterized by an imbalance between growth of the economy and the development of human resources. To redress this situation, the Government has embarked upon a massive expansion in its social development program. Although some of the elements of this program date back to the late 1960s, progress has been most marked only in the last few years, which were characterized by an abundance of oil revenues; Indonesia is now in the very middle of this expansion phase. Some of the benefits have already been felt, but many have not; any scaling down in expansion at this stage would be undesirable and, as Part I demonstrated, unnecessary. Chapter 6 focuses specifically on Government interventions in education, health, nutrition and food supply, and shelter (housing, water supply and sanitation). The analysis is not intended to be comprehensive; rather, an attempt is made to briefly document recent progress, to highlight key issues in each sector, and where relevant, to describe in broad terms a feasible program for the decade ahead.

In Part I of this report a High policy case was recommended as necessary if high economic growth was to be maintained throughout the 1980s. The employment and human development programs and policies recommended in Part II should be seen as an integral part of that High policy case. Their influence tends, however, to be longer-term in nature. If Indonesia is to maintain its "momentum of development" not only throughout the present decade, but into the 1990s, it really has no choice but to give the development of its human resources the highest possible priority.

5. POPULATION, LABOR AND EMPLOYMENT

5.01 Indonesia's population of 147 million as enumerated at the October 1980 Census, was between 5 to 7 million higher than had been expected on the basis of earlier population projections. The actual average annual population growth rate observed for the period 1971-1980 was 2.3%, higher than the 2.0% growth rate observed during 1961-71 which had been used in earlier projections. The new census results have important implications for the future size, structure and growth of population, and consequently for the planning of human resource and social development programs. For instance, the anticipated growth rate of the labor force determines the required magnitude of employment growth; the growth rate of the school-age population sets the targeted rate and composition of educational expansion; and the overall growth rate of population influences the pace at which various social services (health, housing, water supply and sanitation) need to be expanded.

5.02 These remarks set the general context for the discussion of recent trends and projections of population, labor force and employment taken up in this chapter and the social development programs outlined in chapter 6. This chapter contains a discussion of recent developments in population and labor force growth and projections for the future. In the light of these, prospects for employment growth in the coming years are discussed. An annex to the chapter (Annex II) presents a more detailed discussion of the methods of estimation of the vital rates, comparability of labor force data from different sources, and other methodological and technical details.

Population and Labor Force: Trends and Projections

5.03 Population. Indonesia's average annual population growth rate of 2.3% over the 1971-80 period compares with average population growth rates for low and middle income countries of 2.1% /1 and 2.4% respectively during the same period. Preliminary estimates for Indonesia, based on the 1980 population Census, point to a relatively higher decline (22%) in the crude death rate than in the crude birth rate (14%). These good achievements in mortality and fertility reduction were made possible by substantial declines in infant mortality and improvements in medical and health services (paras. 6.44-6.47). A feasible program for future health service expansion is described in the next chapter; in the light of this, it is projected that the crude death rate will decline by a further 20% in the 1980s and by 17% in the 1990s.

/1 2.6% p.a. if China and India are excluded.

5.04 The family planning (Keluarga Berencana) program has played a central role in achieving fertility reductions over the last decade, and will continue to do so in the future. The official program started in the six provinces of Java and Bali in 1970, was extended to ten provinces in the Outer Islands in 1974, and to the remaining 11 provinces in 1979.^{/1} By 1980, the program had recruited over 16 million acceptors, constituting nearly a third of all women in the reproductive age. During the 1970s the birth rate fell at an average annual rate of 1.4%, a rate that was more rapid than the average for developing countries.^{/2} As would be expected, given the geographical progression of the program, fertility reductions on Java and Bali (estimated at 20%) accounted for the bulk of the national decline. Indeed, fertility reduction in the Outer Islands appears, so far, to be modest. With the extension of the geographic coverage of the program and the anticipated diffusion of the new pattern of fertility behavior induced by it, as well as by general socio-economic changes (particularly mortality reduction), the national birth rate is projected to decline by 14.3 percent in the 1980s and 14.7 percent in the 1990s (Table 5 and Annex II).^{/3} This anticipated decline is about the same as experienced during the 1970's (1.4% p.a.) but is substantially below the target of 2% p.a. set by the Family Planning Board (BKKBN).^{/4} While attainment of the BKKBN target cannot be ruled out, it would call for a much higher rate of acceptance of birth control techniques than in the past decade both in the Other Islands and in parts of Java (notably West Java). In view of the 1980 census results, the Government is currently renewing its efforts to

^{/1} For an overview of the family planning program, fertility change and the socio-economic determinants of family planning practice in a provincial context, see Dov Chernichovsky and Oey Astra Meesook, Regional Aspects of Family Planning and Fertility Behavior in Indonesia, World Bank, November 1980 (presented to the IGGI meeting in May 1980).

^{/2} Over a period of 19 years (1960-79) the average annual birth rate reduction for 36 low-income countries was 1.3%. If China and India are excluded, the average percentage reduction was only 0.6%. Middle income countries had an average reduction of 0.8%.

^{/3} Relatively smooth declines in age-specific fertility schedules were assumed for the purpose of preparing population projections. These along with the changing age distribution produce the birth rates reported in Table 5.1.

^{/4} The BKKBN target was for a 50% reduction in the birth rate from 44 per thousand in 1970 to 22 per thousand in 1990. If achievements in 1980 were to have been commensurate with this target and if it assumed that progress toward the target by 1990 is to be smooth, the birth rate should have been around 31 instead of the actual (estimated) value of 35.6.

improve the chances that the target will be met. Attaining the target would result in a population of 211 million in 2000 instead of the 217 million implied by the rate of decline set out in Table 5.1.

Table 5.1: POPULATION: ACTUAL AND PROJECTED GROWTH AND AGE STRUCTURE

Year	Estimated Mid-Year Population (million)	Crude Birth Rate (per '000 population)	Crude Death Rate (per '000 population)	Population Growth Rate % p.a.	Percent of Population in Age Group		
					0-14	15-64	65+
1971	118.6	40.7	16.7	2.40	44.1	53.5	2.5
1980	146.6	35.0	13.0	2.20	41.6	54.9	3.5
1985	162.8	32.4	11.8	2.06	40.1	56.4	3.5
1990	180.0	30.0	10.4	1.96	37.7	58.7	3.6
1995	198.1	27.9	9.4	1.85	35.7	60.4	3.9
2000	216.7	25.6	8.6	1.70	34.0	61.7	4.3

Source: Annex II.

5.05 The labor force grew at an annual average rate of 2.9% during the 1971-80 period. This is expected to accelerate to 3% in the 1980s, due to a combination of changing age structure (Table 5.1 and para. 6.51) and labor force participation rates (Annex II). Currently, participation rates - by age and sex - are undergoing a transition. Among the young, especially for males in the 10-14 and 15-19 age groups, participation rates are declining due to the expansion of educational opportunities. As this continues, overall participation rates in the 22-25 age range will reach their peak levels and stabilize; among males this peak has almost been reached, but among females increases are likely to continue.

5.06 Open unemployment threatens to become a serious problem in Indonesia, particularly in the urban areas. Until a few years ago, open unemployment was not thought to be statistically important, and generally was not addressed as a separate phenomenon. In 1971, for example, it was about 2.3% of the labor force. However, the 1980 Census indicates an overall unemployment rate of 4.1% - not an alarming number by the standards of most industrial countries - but higher than the traditional one or two percent.^{/1} The problem is in fact already becoming severe in some urban

^{/1} There are a number of different estimates for open unemployment in each of the years in which employment surveys were undertaken. Therefore, the precise magnitude of the problem is not known.

areas. For example, unemployment among urban males below the age of 24 is around 20%, and increases with the level of education (para. 6.32). With population growth, the pressure on land and hence the need for off-farm employment in rural areas is increasing at a rapid pace. At the same time, there are indications that educated rural youth are showing declining interest in agricultural work. These factors are likely to lead to higher levels of open unemployment in the future unless the Government can accelerate the rate of job creation outside agriculture.

5.07 Indonesia's principal employment problem is still a lack of remunerative employment on a full time basis.^{/1} Few can afford to stay idle; some work very long hours at low levels of reward and others accept whatever part-time work is available. Almost by definition therefore, employment rises at about the same rate as the work force. The behavior of real wage rates therefore gives a better indication of labor market developments than do employment rates. Most evidence from village studies as well as published data for 1976-79 indicate almost no change in the rural real wage over the last decade,^{/2} although preliminary evidence suggests some improvement over the last three years. Based on a comparison of Indonesia with other rice economies in East Asia, a recent report ^{/3} concluded that the point of time when real wages for unskilled workers will begin to rise and thus share in national productivity growth, is not yet close. The need for rapid growth of demand for labor will, for decades to come, remain a central economic and social issue and a fundamentally important criterion against which to judge the efficiency and appropriateness of Government policies and investments in Indonesia.

Selected Employment Issues: Policies and Prospects

5.08 Sectoral Employment Trends. Between 1971 and 1980 employment grew at about 2.7% p.a., with the highest growth rates in construction and social and personal services, including Government employment. The share of agriculture in total employment fell from 66% to 55% during the nine year period. The growth of agricultural employment at 0.7% p.a., was less

^{/1} For example, in 1980 among rural males the percentage of the work force working less than 24 hours a week was 25% in agriculture, 15% in manufacturing, 19% in distributive trade and 15% in services.

^{/2} A detailed assessment of wage rate developments is given in World Bank: Wages and Employment in Indonesia; September 1981, World Bank draft. This report was based upon wage data only up to 1979. Some observers believe that evidence since that time suggests that the "turning point" may be closer than suggested by the report.

^{/3} Ibid.

than half the growth rate of the rural population./¹ Table 5.2 summarizes these developments. The ratios in the last column indicate the approximate employment response during the 1970's to a 1% increase in sectoral output. In general, elasticities were higher in the service sector than in agriculture and manufacturing, reflecting increased capital intensity (and hence labor productivity) in the latter.

Table 5.2: SECTORAL EMPLOYMENT GROWTH, 1971-80

Sector of Activity	Employment		Average Annual Growth Rate (%)		Sectoral Employment Elasticity (A/B)
	1971 --- ('000)	1980 ----	Employ- ment A	Value added B	
Agriculture, Forestry, Fishing	27,114	28,816	0.68	3.88	0.18
Industry	4,149	6,589	5.27	11.56	0.46
Manufacturing	3,204	4,540	3.95	13.80	0.29
Construction	805	1,596	7.83	15.60	0.50
Trade, Transport, Finance	5,593	8,635	4.94	8.94	0.55
Social and Personal Services	4,280	7,998	7.19	9.32	0.77
<u>Total All Sectors</u>	<u>41,136</u>	<u>52,038</u>	<u>2.65</u>	<u>8.14</u>	<u>0.33</u>

Source: Annex II.

¹ The 1980 labor force and employment data are from preliminary tabulations of a sub-sample of the 1980 Census. The final Census results which are likely to be available later this year may call for revisions of some of the figures reported here. There are always serious problems of measurement. For example, the 1971 Census data and the 1976 labor force survey data on agricultural employment imply an average annual growth rate of 2.7 percent; the 1971 Census and 1977 survey data imply an annual growth rate of 2.2 percent; 1971 Census and 1978 survey data imply a 3 percent growth rate. These rates are subject to seasonal variations and other problems of comparability reviewed in Annex II.

Employment Prospects for the 1980s

5.09 During the present decade an additional 19 million persons are expected to be added to the labor force. Employment growth will depend on the rate and sectoral composition of output growth and on sectoral employment elasticities. The conclusion of this chapter is that even under a high growth scenario, Indonesia's rapidly growing labor force may not be fully absorbed in productive employment. The possibility of rising open unemployment should not be ruled out. This underlines the undiminished importance of a very active employment strategy, including policies and public sector investment programs which put a premium on stimulating the demand for labor and on increasing the quality of labor supply./1

Table 5.3: PROJECTED EMPLOYMENT, 1980-90

Sector	Annual Sectoral Growth Rate	Annual Employment Growth Rate	Total Employment (millions)			Share of Total Employment (%)		
	1980-90 ----- (%)	1980-90 ----- (%)	1980	1985	1990	1980	1985	1990
Agriculture	3.6	0.6	28.8	29.7	30.6	55	51	46
Industry	10.7	4.9	6.6	8.4	10.6	13	14	15
Services	7.3	4.8	16.6	21.0	26.5	32	35	39
Total for all sectors	<u>7.5</u>	<u>2.8</u>	<u>52.0</u>	<u>59.1</u>	<u>67.7</u>	<u>100</u>	<u>100</u>	<u>100</u>
Total Labor Force			<u>54.3</u>	<u>62.9</u>	<u>73.2</u>			
Unemployment Rate (%)			4.1	6.0	7.5			

Note: The projections in this table are only illustrative. they are based on the assumptions that the High policy case growth rate prevails and the responsiveness of employment growth to sectoral GDP growth remains unchanged.

Source: Annex II.

/1 Employment issues similar to the ones raised here and in the remainder of this chapter were the key theme of a recent (December 1981) Conference of the Indonesian Economists' Association held at Yogyakarta. The conference declared that the key objective of economic development should be the creation of productive employment opportunities to all members of the labor force. It also endorsed the need for human resource development on a broad front (education, training, health, nutrition, etc).

5.10 As an illustration of the problem, Table 5.3 presents projected future employment growth on the assumption that: (a) the level and sectoral composition of economic growth will be that projected under the High policy case of chapter 3; and (b) the sectoral employment elasticities will remain unchanged. Under this scenario, by 1990 the service sector would account for nearly 40% of total employment and open unemployment as a percentage of the labor force would almost double to 7.5%. In fact, of course, the responsiveness of employment to output growth can be influenced by Government policy and the capital-intensity of investment is partly determined by public investment decisions. There may therefore be scope for considerably higher elasticities than those assumed in table 5.3. For example, a major disappointment in the employment performance over the last decade has been the very poor growth in employment in the manufacturing sector, due to a high average capital-intensity of production. This in turn was due to a system of incentives that favored capital-intensive investment and a public investment program that, for good reasons, was directed toward large, capital-intensive resource-based industries. The scope for influencing labor absorption in various economic sectors is briefly discussed in the paragraphs that follow. Emphasis is given to four key sectors: agriculture and transmigration, local public works (INPRES) programs, manufacturing and the tertiary or service sector.

5.11 Agriculture and Transmigration: Two broad developments are now underway affecting labor absorption in Javanese agriculture. On the one hand cropping intensity has increased substantially (para. 6.60) and is still rising, thus raising the demand for labor. On the other hand, new technologies have been introduced, which have tended to reduce employment. These two influences appear to have roughly offset each other. For example, employment in rice farming in Java, currently about 16 million or 58% of total agricultural employment, changed little over the last decade. A number of factors suggest that, in the future, employment in food production is more likely to fall than to rise. Currently about 6.3 million hectares are under food crops in Java, /1 and the rate of urban expansion and infrastructural growth indicates that this is likely to fall in the years ahead./2 Cropping

/1 Tree crop estates account for about an additional 0.5 million hectares.

/2 This is on the assumption of an unchanging composition of Javanese agriculture. In fact, there appears to be considerable scope for increasing the efficiency of land use in Java. For example, teak forests account for about 1 million hectares on Java. Teak has a very low rate of return (it takes 60 years to mature) but is still being planted. Much of the teak is on land suitable for quicker maturing crops such as coconut or long fibre soft woods. Similarly, there are large tracts of old and unprofitable rubber trees, particularly in West Java. Some of this land may be suitable for horticulture or citrus and could thus yield a much higher return than at present. There is an urgent need for detailed land use studies in Java to explore these possibilities.

intensity will continue to rise in line with the expansion of irrigation facilities, but present trends and international experience suggest that this will be more than offset by continued mechanization. The limited data available suggest that labor use per rice crop may have fallen by as much as 35% during the 1970s, and Indonesia is only at the first stage of mechanization. A recent study /1 showed that labor use would be halved with the introduction of a mechanization package consisting of a tractor for field preparation, a rotary weeder, and a contract labor (gepyokan) system for harvesting. At still higher levels of mechanization where all the operations are done by just one individual and a set of mechanical devices, hours worked per hectare would be about one tenth of the 1977-80 average. Currently, subsidized interest rates and fuel prices tend to bias a farmer's decision in favor of capital-intensive and energy-intensive technologies. This may have profound effects on employment, and on its own is a strong argument for the rapid elimination of subsidies on the use of capital and energy. Once a mechanized approach has been adopted it is unlikely to be reversed.

5.12 Most of the increase in aggregate agricultural employment in the 1970's was accounted for by growth in the estate crop sector and by transmigration. Of the 1.8 million increase in agricultural employment between 1971 and 1980, 1.4 million (77%) was off Java. Currently about 11 million hectares are under cultivation in the Outer Islands and there is vast scope for expansion./2 The transmigration program has played an important role; between 1971 and 1980, about 300,000 persons found employment in agriculture through the program, accounting for about one sixth of the increase in agricultural employment./3

5.13 The Construction Sector: INPRES Programs: Given the limited contribution to employment creation that can be expected from the agricultural sector, a major challenge for the government is to stimulate

/1 William L. Collier, Improved Cropping Patterns, Labor Absorption and Small Rice Farm Mechanization in Java, September 1981. (Paper presented at the joint (A/D/C - IRRI Workshop on Consequences of Small Rice Farm Mechanization, Los Banos, Philippines).

/2 Unalienated land suitable for annual crops is estimated at over 20 million hectares and land suitable for tree crops at 6 million hectares, excluding nearly 40 million hectares of swamp land where development requires control of drainage. These hectarage figures are from a recent draft report, World Bank: Policy Options and Strategies for Major Food Crops, (November 1981 draft). The data should be treated as orders of magnitude only.

/3 About 150,000 families were transmigrated through the official program. It is assumed that there were two workers per family.

growth in off-farm employment in rural areas, particularly in Java. An important way in which the Government has responded to this need has been through large increases in public works expenditures. Although all Government programs create employment, the INPRES /1 programs, by giving priority to labor-intensive construction and the use of local resources, are a particularly important source of employment in rural areas. These programs, which have the dual objectives of employment generation and the construction of social and economic infrastructure, have been mostly successful in achieving these objective. Table 5.4 summarizes the dramatic increases in allocations to the various programs. As a proportion of the total development budget, these programs rose to 20% in 1970/71, fell to 7% in 1974/75 and rose again to 16% in 1982/83. The contribution of INPRES programs to various social sectors - education, health, water supply - will be discussed in Chapter 5. Of interest in this section is their effect on employment.

Table 5.4: INPRES PROGRAMS: BUDGET ALLOCATION AND EMPLOYMENT GENERATION

Period	Average Annual Allocation (Rp Billion)	Estimated Annual Employment ('000 man-years) /a
1970/71 - 1973/74	43.5	319.5
1974/75 - 1978/79	255.6	932.6
1979/80 - 1981/82	767.3	1,273.0
1982/83	1,486.0	n.a.

/a Includes direct (on-the-job) and indirect (manufacture of materials) employment generated by the program. For the computation of man-years, 300 working days are assumed per year.

Source: Annex II: Table 7. Based on Bank staff estimates in INPRES Programs - Their Impact and Prospects (A Background Paper).

/1 Instruksi Presiden. Funds are provided by the Central Government to various levels of local government either for specific uses or to be used at the discretion of the local authorities. There are currently eight major programs: Inpres Dati I (provincial level), Dati II (Kabupaten), Desa (village), Sekolah (primary schools), Kesehatan (health and water supply), Penghijauan (regreening, forestry), Jalan (minor roads) and Pasar (markets).

5.14 Estimates of employment generated by the program are presented in Table 5.4. These estimates include direct labor used in the construction of the various projects and indirect labor inputs into the construction materials. No account is made for any multiplier effects which may generate further local employment. In 1981/82, an estimated 1.5 million man years of work were created through this program, enough to employ 2.7% of the total labor force on a full time basis. Generally the programs do not provide work for a full year; more accurately, about 4.5 million 100-day jobs were created, directly affecting the living standards of over 20 million people. These calculations exclude the labor requirements of the INPRES Desa since under that program labor is provided on a voluntary basis.^{/1} Over the last few years the growth in INPRES employment has absorbed approximately 20% of the growth in the total labor force. This underlines the crucial importance of these programs in Indonesia's overall employment picture. INPRES programs also had a key role in the rapid expansion of the construction sector (15.6% p.a. increase in value added during 1971-80). In 1971 jobs created in the construction sector by the INPRES programs accounted for about 18% of all jobs in the sector. By 1980 it is estimated that this percentage rose to about 40%.^{/2}

5.15 The INPRES programs can be expected to continue to play this important role in the future. In this regard, interesting issues arise in the choice of criteria for allocating funds by Region or by Kabupaten. Should resources be allocated on a per capita basis, on poverty or employment grounds, or according to particular investment needs? The allocation varies greatly according to which criterion is used.^{/3} Given the powerful employment-generating effects of the programs, there may be scope for greater

^{/1} About 75 million man-days of voluntary labor were provided under the village program in 1981/82 (estimate). The INPRES forestry program was also excluded due to lack of data.

^{/2} These percentages may be over-estimates of the average importance of INPRES throughout the year, since total employment in the construction sector is derived from the Census, which was conducted during October - the slack season - and the INPRES programs are designed to have a particularly strong (counter-seasonal) influence during that period.

^{/3} In the early days of the program, the lack of socio-economic infrastructure was given priority. Thus for example in 1971/72 Sumatra and Kalimantan, with 21% of the population received 56% of the INPRES funds. Since that time allocations have been brought more in line with population, although allocation per capita on Java is still below half the average for the Outer Islands. In 1981/82 total per capita allocations for all 8 programs were Rp 4,233 to Java, Rp 8,740 for Sumatra, Rp 14,378 for Kalimantan, Rp 9,913 for Sulawesi, Rp 9,304 for Bali and Nusa Tenggara, Rp 30,303 for Maluku and Irian Jaya. The average for Indonesia was Rp 6,550.

flexibility to permit the allocations of funds to be adjusted to counteract specific income and employment shortfalls. For example, the 1978 devaluation and favorable terms of trade developments in 1979 greatly benefited traditional export areas. Average incomes in Sumatra and Kalimantan probably rose significantly in relation to those in Java. In 1980 and in 1981 this situation was reversed. A bountiful rice crop and low import prices benefited Java while a serious decline in traditional export prices caused income shortfalls in parts of Sumatra and Kalimantan. Given this sensitivity of relative incomes to external circumstances there would seem to be a case for adjusting allocations of particular programs to changing circumstances. This must not, of course, be allowed to disrupt ongoing investment projects. For this reason, specific annual projects (e.g. INPRES Desa) could be used for this purpose.

5.16 Manufacturing: Between 1971 and 1980, employment in manufacturing rose from 1.3 million to 4.5 million - an extremely poor performance given the limited scope for employment growth in agriculture and the high rate of industrial investment. No direct data is available on investment in manufacturing, but it is estimated that roughly one third of total investment took place in the manufacturing sector over the last decade. That means that each new job created cost on average about Rp. 12 million or US\$20,000 in investment outlay (in 1980 prices). About half of the increase in manufacturing employment came from household and cottage industries (less than 5 employees), where investment per job created may be estimated at around Rp. 1.2 million (US\$2,000), and half from small to large size industries where the average investment per new job created was around Rp. 23 million (US\$38,000).

5.17 The Government's stated intention has been the promotion of labor-intensive and natural resource-based industries, in which Indonesia has a presumptive comparative advantage. A number of Government policies are specifically designed to encourage employment in small-scale industries, and to discourage labor-displacing investments. For example, Government procurement regulations /1 have recently been amended to favor small, indigeneous companies. Similarly, certain sectors and regions have been "closed" to investment in order to protect employment in small, less competitive companies./2 The question is whether these specific interventions are an adequate and appropriate response to compensate for the slow employment growth in medium and large scale enterprises. Despite progress toward promoting labor-intensive development (for example, through the provision of credit and extension services to small-scale enterprises and the 1978 devaluation of the rupiah), the general incentive framework in Indonesia, as determined by

/1 KEPRES (Presidential Decision) 14A, 1981.

/2 The 1981 Daftar Skala Prioritas (DSP) issued by the Investment Board (BKPM), lists over 90 closed sectors.

taxes, subsidies, interest rates and other pricing policies, remains biased in favor of the employment of capital over the employment of labor. For example, artificially low interest rates for investment capital lead to distortions in the choice of technology, and high rates of effective protection on final products (as opposed to inputs) have encouraged the development of assembly type import-substitution industries, which tend to be capital intensive,^{/1} and have discouraged backward integration. The introduction of a more neutral trade regime, coupled with institutional changes facilitating the linkage between large and medium scale industries with small-scale and cottage industries, could significantly improve the pattern of labor-absorption in manufacturing.^{/2} Recent policy measures to encourage exports, described in Chapter 2, are important steps in the Government's efforts to redress the remaining anti-employment biases of the trade regime.

5.18 The Service Sector: The tertiary, or service, sector has played a central role in absorbing the rising labor force, accounting for 62% of the total increase in employment between 1971 and 1980.^{/3} During the period, the share of service sector employment in total employment, rose from 24% to 32%, while its share in total GDP actually fell. In Java, the service sector has become the source of residual part-time low-wage employment, traditionally the role of agriculture. As such it serves an important purpose, in providing income where no other is available, and in preventing the emergence of open unemployment. The sector need not, however, be viewed primarily as a residual, or be assigned low priority. Well directed programs for tertiary sector employment, for example in education, agriculture extension services, family planning and health services, can effectively contribute towards productivity growth elsewhere in the economy and thus become an instrument for development, rather than a residual factor in the overall employment picture. The proposed programs in the social sectors, described in the next chapter, are essentially labor-intensive, and in many cases the labor required is not highly skilled. For example, the Village Community Health Development Program (para. 6.49) will require 100,000 village primary health workers and 8,500 primary nurses by the end of Repelita III and this will only provide coverage to 6% of the population; the water supply program proposed for the decade (para. 6.91) would require an additional 100,000 workers, just for operation and maintenance; and the expansion of primary and secondary education envisaged (Table 6.1) would require an additional 700,000 teachers.

^{/1} According to Bank staff estimates, the capital-intensity of the import-competing sectors in Indonesia is four times that of export sectors.

^{/2} Detailed analyses of these issues are presented in: World Bank: Wages and Employment in Indonesia; op. cit., and in last year's country economic report.

^{/3} For Java, this percentage was 68%, and for the Outer Islands, 53%.

Key Elements of an Employment Strategy

5.19 In broad terms there are three ways in which the Government may promote increased employment creation. First, the public investment program is itself a powerful instrument for generating public employment. For example, over the last decade the combined INPRES and transmigration programs alone provided employment equivalent to about 15% of the labor force increase. It is desirable that the employment impact of various public expenditures be given higher priority when allocating funds among alternative uses. In particular, if revenues from the oil sector turn out to be lower than projected, a possibility that cannot be ruled out, cuts in the public investment program that may become necessary should probably be made in sectors where the employment impact will be least, notably in heavy industry.

5.20 Second, the Government may provide the appropriate incentive system required for investment in labor-intensive activities. This is especially important for the manufacturing sector whose contribution to employment must be improved as a matter of priority. Given Indonesia's surplus of unskilled labor and consequently low wage rates, this simply means that the Government should refrain from distorting incentives in favor of other factors of production such as capital, energy and technology. Other more specific interventions to encourage labor-use - such as procurement regulations and prohibitions on investment in certain sectors - may have a useful role to play in the present Indonesian policy context, but in the longer run, setting factor prices equal to their economic scarcity values is likely to have a much more profound impact on employment than intervention through regulation to compensate for the present underlying distortions in input prices.

5.21 Finally, the Government must play a central role in promoting the general upgrading in the quality of the labor force. "Employability" is increased most obviously through education, but other elements of human development - health, nutrition, sanitation, water and housing - are also essential. These are the theme of the next chapter. Ultimately, economic development is only meaningful if it involves the development of human potential and improvements in the quality of life. It is to these issues, and in particular, the role of the Government in guiding and financing the accelerated development of human resources, that we now turn.

6. HUMAN RESOURCE DEVELOPMENT AND THE QUALITY OF LIFE:
PROGRESS AND PROSPECTS

6.01 This chapter explores four broad areas relating to the development of human resources in Indonesia: education and manpower training; health; nutrition and food supply; and shelter (housing, water supply and sanitation). It broadly endorses the Governments' recent emphasis in these areas and the general direction of Government policy. It recommends that the highest priority should continue to be given to these programs, not only on social and humanitarian grounds - which are sufficient justification themselves - but also because the development of its human resources is fundamental to Indonesia's economic prospects in the coming decades.

6.02 It is of course very difficult to define an appropriate target for government involvement in, and expenditure on, human development programs. Experience from other countries suggests, however, that governments that have succeeded in assuring virtually everyone access to primary education, health care, family planning services, adequate food, pure water and sanitation are generally spending a somewhat higher proportion of national income on these social programs than Indonesia. Although cross-country comparisons are fraught with all kinds of well-known difficulties, they can provide a rough indication of the expenditure effort required in the various programs. A recent study^{/1} of a broad range of developing countries concluded that it was desirable and feasible for governments to spend between 1%-3% of GNP on health care, hygiene and family planning; 3%-6% of GNP on primary education, and 1%-3% of GNP on pure water supply and sanitation.^{/2} These figures include both capital and recurrent expenditure. The appropriate level of expenditure within these ranges depends on the initial level of services and the contribution of the private sector. By way of comparison, Indonesian Government expenditures (as a percent of GNP) are about 1.2% for health care and family planning, 2.5% for primary education, and 0.4% for water supply and sanitation; and Indonesia starts from a low initial level of service in most of these sectors, relative to its income.

^{/1} World Bank: Implementing Programs of Human Development; Staff Working Paper No. 403, July 1980, p.124.

^{/2} This "comprehensive" package includes five years of school; medical and health care facilities of a reasonable quality within one hour of travel time; at least 20 liters per day of pure water, available within 100 meters of the dwelling; a pit latrine, family planning services; and good knowledge of hygiene. Each country's own standards are assumed to prevail. Typically governments of developing countries are spending less than these amounts on programs that are far from comprehensive, and whose effectiveness is often reduced by lack of money for operating costs.

6.03 Questions of finance are not necessarily the most pressing issues in these sectors. However, Indonesia's changing resource position adds urgency to the question of whether the momentum of progress in these sectors can be continued. In the present chapter, therefore, an attempt is made to indicate roughly the expenditures required during the 1980's in order to achieve a reasonably comprehensive level of coverage of various social services by the end of the decade. The most detailed cost estimates will be given for the education, housing, water supply and sanitation sectors, since these are growing the most rapidly and present the most interesting financing problems. Financial data for the health sector are poor and most health care is financed by the private sector; only summary projections will therefore be presented. In the field of nutrition and food availability, the important issues are not financial in nature and no cost estimate will be given.

6.04 As noted earlier in this report, financial considerations will probably not be the most significant constraints on further expansion of these services in the 1980s. Rather, it is the non-financial constraints, such as managerial capacity and the shortage of skilled manpower that pose the main threat to the proposed program. The chapter also makes a number of suggestions in these areas.

EDUCATION AND MANPOWER DEVELOPMENT

6.05 In the past decade Indonesia has made impressive gains in expanding access to education and in improving the skills of the labor force. This progress notwithstanding, there is little doubt that the relatively weak educational base of the population is among the main obstacles to continued rapid economic development in the 1980s. Substantially larger investments to overcome these problems will be needed throughout the 1980s. But in preparing for REPELITA IV, the Government faces a number of crucial questions concerning policy and investment strategy for the sector. Among the more pressing questions are: the choice of an appropriate rate of expansion of secondary and tertiary school enrollment; how to improve the quality of education in both public and private schools; and how to reconcile the apparent contradiction between the observed high unemployment among secondary and tertiary school leavers in urban areas and the overall shortage of skilled manpower in the economy.

Progress in the Past Decade

6.06 The Increase in Enrollments. With the exception of some sparsely populated and isolated areas, and handicapped children,^{/1} the Government's objective of universal access to primary education has virtually been realized. Total enrollment in primary schools as a proportion of the 7-12

^{/1} Some efforts targeted at these groups are already progressing.

year old age group now stand at about 107%,^{/1} up from 65% in 1971 - a remarkable achievement. As Table 6.1 indicates, enrollment in primary schools has increased by almost 6% a year in the past decade, to the point where some 25 million children now have access to primary education.

Table 6.1: CHANGES IN EDUCATIONAL ENROLLMENTS 1970/71 - 1990/91

	1970/71	1980/81	1990/91	Annual Percentage Increase	
				1970/71 1980/81	1980/81 1990/91
<u>Primary School</u>					
Enrollment (millions)	12.9	25.5	30.3	5.7	1.7
Enrollment rate (%)	65	107	105		
<u>Junior Secondary</u>					
Enrollment (millions)	1.4	3.4	11.8	9.3	13.2
Enrollment rate (%)	18	35	100		
<u>Senior Secondary</u>					
Enrollment (millions)	0.7	1.8	7.3	9.7	15.4
Enrollment rate (%)	10	19	75		
<u>Tertiary</u>					
Enrollment (millions)	0.1	0.5	2.0	14.9	15.2
Enrollment rate (%)		3	12		
<u>Total</u>					
Enrollment (millions)	15.1	31.2	51.4	7.5	5.1

Note: Includes enrollments in private schools. Enrollment rates measure the total number of students attending each type of institution as a percentage of the total population in each age cohort. Relevant age groups are: primary: 7-12 years; junior secondary: 13-15; senior secondary: 16-18; tertiary: 19-24.

Source: Appendices to President's speeches, various years, and World Bank/UNESCO staff projections.

^{/1} This is a gross enrollment ratio, and therefore includes under-and over-age children and repeaters. If religious (Madrassah) schools are excluded the gross enrollment rate falls to 98%.

6.07 The rate of expansion in secondary education has been equally impressive, with enrollments increasing at more than 9% a year during the 1970s. Some 35% of the relevant age group now attend junior secondary schools and 22% attend senior secondary schools. These are impressive gains in expanding access to secondary schooling opportunities. At the tertiary level, despite an impressive 15% annual expansion, total enrollment is still very modest. By 1981 only half a million students had access to tertiary education - no more than 4% of the relevant age group. Even then much of the education has been of inadequate quality. In relation to Indonesia's need for skilled manpower, the capacity of the tertiary system is seriously deficient.

6.08 The Impact of Education. There is little doubt that the achievements in the provision of primary education have facilitated Indonesia's rapid economic growth over the last decade. Although no detailed study has been undertaken for Indonesia, evidence from other countries suggests a substantial causal relationship between primary education and economic development.^{/1} This is likely to be particularly true in the agricultural sector during a period of introduction of new techniques. A study in Malaysia demonstrated that farmers with four years of education obtained yields that were on average over 20% higher than their neighbors who had no education.^{/2} Currently in Indonesia, there is much debate over whether the excellent growth in rice production over the last two years is sustainable. Part of the answer must lie in the fact that the agricultural population now includes roughly seven million more people with a primary education than in 1974,^{/3} a number which is increasing by well over one million every year. These recent graduates are generally much more willing to experiment with new techniques and systems than their parents.

6.09 The educational expansion has made major contributions to the process of nation building, growing social mobility, and improvements in health over the last decade. Research undertaken on the influence of education on health in developing countries suggests that the level of education, as measured by literacy or other indices is the most important factor determining improvements in health status; as such it is closely followed by the level of per capita income and it appears to be considerably

^{/1} See e.g. World Bank: Primary Schooling and Economic Development; A Review of the Evidence; Staff Working Paper No. 399, June 1980.

^{/2} World Bank: World Development Report, 1980, page 48.

^{/3} It must be acknowledged that the other side of this picture is increasing evidence that many recently graduated young people in rural areas of Java no longer want to work in agriculture. It is not yet clear how serious a problem this may become.

more important than, for example, the number of doctors per capita./¹ Most striking is the relationship between infant mortality and the mother's education. A study based on 1976 data showed that in Indonesia children of mothers with no education have almost a 50% higher probability of dying as infants than children of mother with six years schooling./² The impressive decline in infant mortality rates over the last decade (140 per thousand in 1969 down to 105 per thousand in 1978) is undoubtedly due in part to improved education of mothers, as is the success of the family planning program. As the proportion of the population with elementary education increases in the years ahead this trend is likely to continue.

Priorities for the 1980s

6.10 In the light of these achievements, what is the appropriate strategy for education and manpower development over the next decade? Government spending on education is currently the equivalent of about 4% of GDP, which is now roughly in line with the average for all low-income countries (4.1% of GDP in 1977). About 70% of these expenditures are for primary education. Given that the need for new primary facilities will be gradually reduced, the question is whether investment should now be directed increasingly towards raising comparatively low enrollment and even lower graduation rates in secondary education, or whether priority should be given to technical manpower training for specific occupations, or to a general upgrading of the entire educational system in its present size.

6.11 This report takes the view that the Government's emphasis on increased budgetary allocations for education, which was evident in the President's 1982/83 budget message will have to be maintained, at least through most of the 1980s, if there is to be a significant improvement in access to education at higher levels and if progress is to be made towards quality upgrading wherever feasible. For the decade as a whole, the priorities therefore are:

- (a) To improve the quality of primary education, now that there is near universal access to schooling at this level;

^{/1} See e.g. World Bank: The Effects of Education on Health; Staff Working Paper No. 405, June 1980.

^{/2} Source: *ibid*, p.77: Based on mothers aged 30-34. Cross country studies indicate that on average an additional year of schooling for a mother results in a reduction of 9 per 1000 in the mortality of her offspring.

- (b) To bring about a major expansion in the quantity of both junior and senior secondary education, and strengthen efforts to improve its quality through the upgrading and further expansion of teacher training colleges;
- (c) To expand opportunities for tertiary education in a substantial but selective fashion through a more systematic assessment of Indonesia's future professional manpower needs and staff development.

6.12 The need for significant quality improvement at all levels of education is generally recognized in Indonesia. But there is, at least at some levels, inevitably a trade-off between the quantitative expansion of education facilities and their qualitative improvement. These two objectives cannot always be achieved simultaneously. The inadequate supply of qualified and experienced teachers is usually the principal obstacle. At this juncture in Indonesia's educational development, the conflict between quantitative and qualitative objectives is particularly acute with regard to the expansion of general junior and senior secondary education, and in tertiary education. The Government is currently addressing the problem of low teaching quality through a number of "in-service" and "on-service" upgrading schemes. A continuation of these programs is essential if quality levels are to be maintained, let alone improved, in the face of the rapid increase in enrollments. This report takes the position that, with regard to general secondary education, priority ought to be given to the expansion of access to educational facilities, even if there is little progress for a period in improving quality.

6.13 To accomplish the program described in the following paragraphs, public outlays for education and manpower development will have to rise to about 6% of GDP by the end of the decade. At that time the share of GDP allocated to education in Indonesia would be roughly equal to the average of all industrial countries today. As the analysis in Chapter 3 suggested, such a program is within Indonesia's expected financial capacity in the 1980s, and if successfully implemented it would lay firm foundations for sustained development in the 1990s and thereafter. However, successful implementation of both qualitative and quantitative aspects of the program would require concerted efforts to expand the supply of well-trained teachers, especially for secondary schools and for technical subjects. Similarly, the skills of existing primary school teachers can and need to be upgraded. Further improvements in planning and administrative capacities will also be needed to ensure efficient execution of such a vastly expanded education program. But even so, the private sector will continue to have a major role in meeting the growing demand for education at the secondary and tertiary levels, and ways should be found to facilitate improvements in the quality of this education.

6.14 Primary Education. Given that near universal primary education now exists in Indonesia, the main task at the primary level during the 1980s will be to improve the quality of this education and reduce drop-out and

repeater rates which are, at present, still high. Such a program will mean increased attention to teacher upgrading, curriculum development, provision of textbooks and other teaching aids. The shortage of textbooks and other educational materials has posed serious handicaps to teaching staff and, in combination with learning by rote, has resulted in unnecessarily poor quality of education in some areas.

6.15 For the decade ahead, it is reasonable to expect that enrollment in primary school will grow at slightly less than 2% a year, roughly in line with population growth. This implies primary enrollments of about 30 million by 1990 (see Table 6.1).

6.16 Secondary Education. Although enrollments have increased by more than 9% a year in the past decade, gross enrollment rates at the secondary level are still low by comparison with other countries at comparable levels of income. Whereas Indonesia has an enrollment rate of 29% for the combined junior and senior secondary level, comparable figures for low and middle income developing countries are 36% and 41% respectively./1

6.17 A major investment in secondary school facilities over the next decade is justified on both social and economic grounds. Public demand for junior secondary education is rising very rapidly in line with the number of primary school graduates. Currently the bulk of this demand remains unsatisfied /2, causing growing dissatisfaction among parents and children. Increased secondary school enrollments also appear to be attractive from an economic point of view; the rate of return to investment in upper secondary education is estimated to be 24% in Indonesia, compared with an average of 15.4% in other low income countries./3

/1 Figures for Indonesia, which include all public, private, technical and teacher training schools are for 1980/81, and for other countries for 1978. These gross enrollment ratios tend to overstate the final output rate for Indonesia since drop-out and repeater rates are higher than the average for other countries. The total enrollment in the final year of secondary education is equivalent to only 15% of the age group. Since almost half of this group are in vocational schools of various kinds, only 8% of the age group complete education in general secondary schools.

/2 In 1981 the percentage of pupils graduating from primary school to those entering secondary school was about 70%.

/3 David Clarke: Indonesia: The Labor Market and Expansion of Upper Secondary Schools, World Bank, mimeo; and World Bank: World Development Report, 1980, p.49. These figures refer to "social" rates of return, i.e., economic returns to society as a whole rather than to the particular student.

6.18 Over recent years there has been concern that some countries may be "overinvesting" in secondary education. There is no reason to believe that Indonesia is close to such a position. Indeed recent studies for other countries suggest that fear of declining returns to secondary education may be exaggerated and that it is difficult to "overexpand" investment in the sector, even if further investment implies some temporary decline in educational standards. For example, an important recent empirical study of Kenya and Tanzania suggests persuasively that the rapid expansion towards universal general secondary education in Kenya had far greater economic and social benefit than the more cautious approach of Tanzania.^{/1} These observations are of course in no way intended to suggest that Indonesia's education planners can afford to be relatively relaxed with respect to the need for quality upgrading.

6.19 There appears to be ample justification for a rapid expansion at the secondary level during the 1980s. The question then is, at what rate? Within the Government, consideration is being given to a program designed to raise the gross enrollment rate to 100% at the junior secondary level and to 75% at the senior secondary level by 1990. As Table 6.1 indicates, this would imply an increase in secondary enrollments from 5.2 million in 1980/81 to 19.1 million in 1990/91, an average rate of increase of about 14% a year. Such a program necessarily means heavy emphasis on the quantitative aspects of the secondary school program. Improvements in quality will probably take longer to accomplish. These are nonetheless ambitious targets, especially with regard to the junior secondary level.^{/2} As analysis in Chapter 3

^{/1} Richard Sabot et al: A Preliminary Overview of Educational Policy, Inequality and Productivity: An East African Comparison, World Bank mimeo, November 1981.

Like Indonesia, both Tanzania and Kenya have nearly achieved universal primary education. In Tanzania, the Government decided to constrain the growth of secondary education on the basis of manpower planning considerations. In Kenya on the other hand, the Government expanded public facilities rapidly and strongly encouraged the development of private education. Results show that the Kenyan strategy was superior from the standpoint of raising productivity, economic growth, and improving equity.

^{/2} It should be emphasized, however, that these are gross enrollment rates, that is, they include over and under age students and repeaters. When educational facilities are being expanded rapidly, as in Indonesia at present, gross enrollment rates tend to be much higher than net rates. According to the extent that the Government is successful in reducing repeater rates, net enrollment rates may range from 60% to 80% by the end of the decade.

indicated, these targets are likely to be within the financial capacities of the country. The major obstacles to meeting these objectives are likely to be the availability of a sufficient number of well-trained teachers, particularly in sciences and mathematics, and the administrative and planning capacities needed to implement such a large program.

6.20 During the first half of the 1980s it will be difficult to avoid some reduction in the quality of teaching, particularly at the senior secondary schools. To supply an adequate number of teachers to the vastly expanded secondary school system, it has been necessary to shorten the training period in many of the teacher training colleges from 3 years to 1 year initially - to be followed by further opportunities for formal education later. This means that in the initial years, many senior secondary school students will be taught by teachers who are only a few years their senior. If no special precautions are taken, this could lead to a most undesirable second round of quality reduction later on, due to the drop in quality of candidates available for teacher training in the second half of the decade. Special efforts should be made - possibly through more rigorous recruitment and increased salaries - to secure the best candidates for the teacher training institutions.

6.21 The regional dispersal of secondary education facilities will undoubtedly take on an increasingly important role. It is hardly surprising that, with the present limited secondary school facilities, there are substantial variations among regions in secondary school access (see Table 6.2), and within regions the facilities that do exist are frequently concentrated in urban centers. Thus, for example, final year high school enrollments in urban areas in Java have 3.8 times their proportional share (to population), while rural areas have less than half of their proportional shares. Most of the severe intra-regional educational disparities are due to the unequal distribution of private school facilities. The Government recognizes this problem and plans to redress the inequality in access through its public school investment program. The 400,000 new secondary school places budgeted for 1982/83 are to be allocated mainly to rural areas so that each Kecamatan will have at least one public or private school.

6.22 Tertiary Education. Over the past decade university education in Indonesia has expanded very rapidly. Enrollments now stand at about 500,000 having increased by about 15% a year since the beginning of the 1970s. However, only about 4% of the relevant age group is enrolled in tertiary education at present, a participation rate that is low in relation to other countries at roughly comparable levels of income. In part because of this rapid expansion, the university education system also suffers from problems of low internal efficiency, poor quality and inadequate management. Without a more vigorous attack on these problems, there are likely to be shortfalls in meeting the country's need for high-level manpower in the 1980s in such fields as engineering, science, economics, management and agriculture.

Table 6.2: GROSS ENROLLMENT RATES BY REGION 1979

	Junior Secondary	Senior Secondary
Java	37	26
Sumatra	33	17
Kalimantan	29	16
Sulawesi	35	19
Eastern Indonesia	33	18
Jakarta	53	42
Yogyakarta	58	45

Source: Calculated from data from the Ministry of Education and the Central Statistical Office (BPS).

6.23 In view of Indonesia's great need for professional and skilled manpower, it would be reasonable to plan for continued growth in enrollments at the tertiary level of 15% a year throughout the 1980s. This would mean the number of students enrolled would increase to about 2 million, or about 12% of the age cohort, by 1990. With such a target, however, it would be important to take steps to overcome the problems of low productivity and poor quality that characterize parts of the system today. The low level of output is chiefly due to internal inefficiency of the university system. Recent analysis indicates that the ratio of degree-level output to total enrollment is only about 5% because of high failure and drop-out rates. The high drop-out rates are, at least in part, related to the excessively long and unnecessarily comprehensive programs of study at many universities. In spite of some recent reforms, the orientation of some programs is still largely academic and insufficiently geared to market demand. If the ratio of graduating students to total enrollment were increased to an average of 12-15%, a three-fold increase in output could be obtained in science, engineering, agriculture and economics without increasing enrollments.

6.24 It is important to note that the efficiency of tertiary education varies significantly across universities and faculties. Considerable improvements are reported at the Institutes of Technology at Bandung and Surabaya, for example, through a combination of instituting a credit system of course requirements and an intensive staff development and visiting professor program. Another factor contributing to low productivity in the university system relates to staffing. Although the ratio of full-time staff to students at public universities is good (estimated at 1:12 in 1978), it is not uncommon for these full-time staff to devote only 3-6 hours a week to actual instruction. This is largely due to inadequate university salaries

compelling many faculty members to hold other jobs. The quality of research conducted by faculty members suffers for the same reasons. To overcome such problems, steps will be needed to set minimum standards of teacher workload, and to improve teacher remuneration. Other problems such as inadequate physical facilities, lack of textbooks, laboratory facilities and other instructional materials frequently contribute to the problem of quality of training at the university level. For these reasons, increased budgetary appropriations specifically designed to support quality improvements will be necessary throughout the 1980s.

6.25 Vocational Training and Skill Development. High economic growth in recent years has resulted in an increasingly serious shortage of manpower in key professions - engineers, accountants, scientists, agriculturalists, economists - and in a growing number of technical specializations such as electricians, welders, machinists, etc. Partial analysis of the economy's future skilled manpower needs indicate that in many areas these shortages will persist for some years to come.^{/1} Professional manpower shortages will gradually be overcome with expanded tertiary education along the lines already discussed. But there is also a clear need to expand vocational training programs. Enrollments in the senior secondary level vocational schools (STM and SMEA) are about 475,000, or 30 percent of all senior secondary enrollments including teacher training. This is already a large share by international standards. Although the Government has plans to continue expansion of vocational schools at this level, these schools have difficulty in recruiting teachers with industrial or commercial experience and many of the graduates prefer to continue their studies rather than directly seek employment.

6.26 The Government also has ambitious programs in hand to expand its vocational training centers for out-of-school youths. The effectiveness of this program could be increased if ways could be developed to promote the participation of employers and trade unions in the Government's training programs. The lack of a formal linkage with prospective employers is one factor affecting the relatively low placement of program graduates in employment. Another factor is the limited communication between training centers and employment and placement services.

6.27 Most Government programs in vocational training are designed to provide job entry training for school and out-of-school youths to improve their employment prospects. Another aspect which warrants greater attention is the need for training of employed workers through the development of apprenticeship schemes, and training for supervisors, especially in medium and

^{/1} Last year's economic report (p. 46) presented estimates of annual additional needs for technical, scientific and managerial manpower 1980-1990.

small-scale industries. Most large scale enterprises and practically all foreign owned and joint-venture companies do have in-house training programs. Many employers in medium and small-scale industries appear to feel that the most effective approach towards generalizing a system of in-plant training is a cost-sharing arrangement between the Government and employers. Various schemes have been used around the world, including training levies, tax rebates, and training contracts. The latter may be the most flexible and convenient way of involving employers in the financing of training.

6.28 Efforts are being made to improve coordination of the various training programs organized by such ministries as Manpower and Transmigration and Education and Culture, and by employers and workers. It may be useful to formalize these links through the establishment of a national training authority. This authority would provide a formal linkage with employers and would have responsibility for facilitating national coordination of vocational training activities and plans, and authorizing national training standards. At present, for example, there are no national training standards. Nor are there any trade testing and certification systems for trade and vocational training institutions. The setting of training standards and trade testing is a major requirement for maintaining the relevance of courses to industrial needs, and for upgrading the overall quality of vocational education.

Special Issues in Education Policy

6.29 The Problem of Teacher Training. Rapid expansion in primary and secondary enrollment has inevitably placed considerable strain on the teacher training system. For example, the planned increase of over 400,000 new junior secondary school places by 1983/84 will require an additional 13,300 teachers, primarily from the IKIP one year diploma program.

6.30 While there is no shortage of applicants at both the primary (SPG) and secondary (IKIP) levels,^{/1} the average attainment of the applicants is unacceptably low in key subject areas such as mathematics, physical sciences and languages. A high proportion apply for teacher training only as an insurance in case they are not accepted for a preferred university course.^{/2}

^{/1} In 1981 there were 106,570 applicants for secondary teacher training, and only 26,621 places. Source: A. Somerset, The Quality of Education in Indonesia: Three Issues; Institute of Development Studies, Sussex, mimeo.

^{/2} For example in 1981 at one IKIP only 42% of those offered places actually enrolled and among those with high examination results the enrollment rate was much lower. This, in itself, is not necessarily a bad thing if brighter students are finding opportunities in higher education. It may suggest however that, given the high social returns to primary and secondary schooling, it may be necessary to make a career in teaching more attractive.

If the quality of the entrants to the IKIP is to be improved, it will be necessary for the conditions of employment offered to secondary school teachers to be brought closer to those offered to university graduates in both the public and private sector.

6.31 Low salaries cause many teachers (probably over 50 percent /1 at the secondary level) to hold multiple jobs. This system may have some advantages: it leads to a more equitable distribution of scarce teaching skills among schools, particularly between public and private schools, and it benefits the IKIPs since many lecturers are also secondary school teachers. However, these advantages are probably outweighed by the disadvantages: teachers have little time for preparation, evaluation/2 and correction, and have little opportunity to get to know their students and to create a sense of community at the school. In addition, there is almost no time for original research anywhere within the formal education system. While the current modest quality of teaching in many elementary and secondary schools is not a sufficient argument for slowing down the growth in enrollment, it must be acknowledged that with the rapid growth envisaged it will be difficult even to maintain these standards. It will therefore be necessary to give high priority to upgrading primary and secondary school teacher's skills through "in-service" and "on-service" programs. In addition, in special cases and for the teaching of special subjects, for example mathematics and sciences, greater use could be made of foreign teachers and overseas training facilities to upgrade the quality of teaching at teacher training colleges.

6.32 Unemployed School Leavers and the Labor Market. Despite the need for expansion of secondary school enrollment rates, signals from Indonesian labor force surveys paradoxically suggest that many secondary school leavers are already experiencing considerable difficulty in finding suitable employment, especially in the cities./3 Rates of unemployment tend to be

/1 Estimates from questionnaires range from 40% to 67%. These may be under-estimates since in many cases holding more than one job is contrary to regulations.

/2 As a consequence of this time constraint, examinations are almost entirely multiple choice in format, which imposes severe limitations on their relevance and on the range of intellectual skills that can be tested.

/3 The 1978 SAKERNAS Survey found the following unemployment rates

	Age			
	15-19	20-24	25-29	30 and above
Completed Elementary School	29%	13%	6%	2%
Completed Secondary School	37%	30%	8%	3%

higher than for those with only primary education, apparently because it takes longer for secondary school graduates to find their first jobs. A recent study /1 found that 40% of secondary school leavers were still looking for a job one year after graduation, and that 25% were still seeking work two years after graduation. This problem is common to a number of developing countries, notably India, where the problem is much worse./2 This emerging secondary school leaver problem is indicative more of the process of job-search (i.e., of imperfection in the labor market) than of the long-term demand for educated manpower. Wages for those with upper secondary education are almost twice as high as those with elementary education,/3 but they are also very variable. Having accepted a lower paying job, it is very difficult to "upgrade". There is therefore a tendency to postpone acceptance of a job until it is obvious that no better one can be found and that further education cannot be afforded. These high temporary unemployment rates should not therefore discourage high continued investment in secondary education, but they do impose a real cost, in the form of lost productive employment. The social rate of return to investment in upper secondary education in Indonesia falls from 24% if the first job is found immediately to 16% if two years is taken to find work./4 As the number of secondary school graduates increases rapidly over the next few years, expectations of job earnings will often be unrealized.

6.33 The importance of this phenomenon should not be underestimated. It will require a major effort to improve efficiency in the labor market, and to expand job opportunities for these school leavers. In this regard the Government may wish to consider a large scale campaign in the schools and in the media, with the purpose of improving information on work prospects and bringing expectations to realistic levels. It would be necessary to institute a system of data collection of a wide spectrum of labor market statistics, including wage levels and the number of job openings in various sectors. The "tracer" study currently being undertaken by the Department of Education could be expanded and continued on a permanent basis, and results

/1 "Tracer" study in progress by Department of Education. This is analyzing the experience of school leavers as they enter the labor force.

/2 See e.g, World Bank: Investment in Indian Education: Uneconomic?; Staff Working Paper No. 327, May 1979.

/3 SAKERNAS 1978

/4 David Clarke: Indonesia: The Labor Market and Expansion of Upper Secondary School Education, op. cit.

published widely to assist students in planning their careers./1 The job-search process could be further "formalized" through the introduction of careers counselling at schools and job information centers. All vacancies in the public sector should be advertized and the development of a manpower information system should be given high priority.

6.34 Role of the Private Sector. The private sector plays a very important role in the provision of education, and the Government has encouraged its development. During the 1970s total enrollments in private schools at all levels grew at almost 6% a year, so that by 1980-81 they accounted for 16% of total enrollments. At the secondary and tertiary levels there are over twice as many private as public institutions, and as Table 6.3 shows, private enrollments now account for almost half of total enrollments and are growing more rapidly. The strength of private education is an important asset and, given probable Government budget constraints, must play an important role in raising enrollment rates at the secondary level. There are no estimates of spending on private education, but based on the number of students involved it is probably between 0.5% and 1.0% of GDP. The private general and specialized vocational schools can provide a very useful service by satisfying the education and training demand in urban areas and by leaving the cost burden on the shoulders of direct beneficiaries. Patterns of differential geographic growth of private school enrollments should be identified and the distribution of new schools should be designed to fill the gaps. This can be done by analysis of spatial distribution of public and private schooling opportunities, with the help of the 1980 Census.

6.35 The growth of the private sector can be significantly influenced by Government policy and it is essential that the current favorable environment for private education should be enhanced. Studies should be undertaken to explore appropriate policies in this regard; these may include, for example, the feasibility of extending the provision of free textbooks, subsidized teachers' salaries and tax incentives. The future growth of private enrollments will, of course, also depend a great deal on the growth and allocation of public outlays for education. Given the projected increases in public sector spending which are discussed in para 6.41, a plausible view would be that the rate of growth of private enrollments at the junior secondary level will decline. Some decline might also be expected at the senior secondary and tertiary levels, although that may be less certain if social demand for education at these levels is very strong. If enrollment expands along these lines then the total number of children in private schools would be about 8.5 million in 1990/91 - an increase of a little less than 6% a year during the decade.

/1 Hitherto, there has been a tendency for graduates from general secondary schools to believe that they are only prepared for higher education, while only technical school leavers would go to work. The tracer study is showing, however, that many jobs are available to the former group, although the search time is long, and that the returns - both private and social - to general secondary education are greater than to vocational schools.

Table 6.3: GROWTH OF ENROLLMENTS IN PRIVATE SCHOOLS, 1974/75 - 1990/91

	Number of Private Students (millions)			Percent of Total Enrollment			Annual Percentage Increase	
	1974/1975	1980/1981	1990/1991	1974/1975	1980/1981	1990/1991	1974/75-1980/81	1980/81-1990/91
Primary	2.1	2.3	2.5	15.7	9.1	8.2	1.8	1.0
Junior Secondary	1.0	1.5	2.4	52.5	45.2	20.3	6.8	5.0
Senior Secondary	0.3	0.9	2.8	43.4	49.6	38.4	18.6	12.0
Tertiary	0.1	0.2	0.8	43.0	50.0	40.0	17.8	15.0
Total private	3.5	4.9	8.5	21.8	16.0	16.5	5.9	5.7

Source: 1974/75 and 1980/81 data from Ministry of Education.
1990/91 data are Bank staff projections.

6.36 The registration and certification of private schools by the Ministry of Education is an important task. The quality variation between them is extremely large, probably much larger than in the public school system. Needless to say, a national effort aimed at quality upgrading of the entire education system has to pay special attention to the quality supervision of private schools. A system of external examinations, which now apply to a limited number of private schools, could be expanded to ensure greater objectivity and standardization in the grading of students.

Administrative and Planning Capacities

6.37 The education system is undergoing rapid changes, which under present administrative arrangements, is likely to place even greater strains on the limited base of educators, administrators and planners. Continued rapid growth of the order suggested above is unlikely to be feasible without a number of changes in the present administrative framework. Annual public spending on education during the REPELITA IV period is projected to be four times higher in real terms than in REPELITA II. It is inevitable that such growth will require corresponding adjustments in the administration and planning in the sector. One area that will require close attention in the future concerns management systems and organization. The system of financial and personnel management and equipment procurement was originally designed for a much smaller educational system, in which it worked well. Funding of programs from multiple sources results in imbalances and gaps

in the inputs at the regional level. This is most noticeable in elementary education, where different and overlapping activities are financed by INPRES Sekolah Dasar, routine subsidies to the regions, provincial INPRES funds, provincial direct revenues, and by the central routine and development budgets of the Ministry of Education. These arrangements result in critical funding gaps for certain activities and fragmented management responsibilities. A particular problem concerns the allocation of recurrent costs, which are not budgeted in line with new investment, causing low utilization of newly created assets due to delayed recruitment of teachers and procurement of equipment and shortages of teaching materials.

6.38 A second area of concern is medium and long-term planning in the education sector. At present, there is (with the exception of preparation for the periodic five year REPELITA plans) no medium-term framework for planning future claims on budgetary resources. As in other Government Ministries, planning of educational system requirements tends to be fragmented at the level of individual Directorates General. Related to this issue is the role of provincial authorities in education planning and management. Some of Indonesia's large provinces would by themselves rank among the 25 or so largest countries in the world in population. Yet, although the system of educational planning is relatively centralized on paper, sheer administrative exigencies give scope for local de facto authority in planning above the primary school level. Thus far the provincial authorities possess limited capacities in planning and program implementation.^{/1} Recent efforts have been made, partly with Ford Foundation technical assistance, to strengthen provincial education planning, but most external aid tends to reinforce centralism through funding projects of national scope implemented by central line departments.

6.39 Another aspect which merits close attention at this time is the need for a more systematic approach to manpower planning. Although much attention is correctly focused on short-term solutions to immediate manpower constraints, there is a growing need for a careful assessment of the longer term shortages. Such information can then be used by the Ministry of Education to make appropriate adjustments in tertiary education programs. Most studies on this subject that have been carried out recently indicate massive shortages in most science-based as well as management occupations in the 1980s, for example. But more systematic assessments of likely future manpower requirements are now needed. The work is necessarily of an inter-agency nature in which the Ministries of Manpower and Transmigration, Education and Culture, BAPPENAS and other line ministries will have to cooperate. Involvement of the latter is especially important since these ministries are in the best position to know the future manpower implications of public and private development programs in their respective sectors.

^{/1} Ward Heneveld, "The Distribution of Development Funds: New School Building in East Java," In Bulletin of Indonesian Economic Studies, vol. XIV, No. 1, March 1978, pp.63-79.

Financial Outlays

6.40 What are the financial implications of this proposed ambitious expansion in education and manpower development? Since the beginning of REPELITA II (1974/75) public expenditure /1 on education has grown in real terms at an average annual rate of about 11%, to the point where education now receives the largest development budget allocation (Rp. 1.3 trillion or 8.3% of budget outlays in 1982/83). As a proportion of GDP, education spending by the public sector has risen from 2.3% in the first year of REPELITA II to about 4.0% in 1982/83. Information about private spending on education is fragmentary, and as a result it is difficult to formulate a complete picture of educational outlays in Indonesia, but as noted earlier it is probably between 0.5% and 1.0% of GDP.

6.41 To implement a program along the lines already discussed, and after allowing for a continued significant role for private schools, public expenditures on education would have to grow at about 12% a year in real terms throughout the 1980s. This would imply public education spending equivalent to 5.6% of GDP by 1990. When in-service training programs financed by other government departments are added, the total would approach 6% of GDP. Based on the High case analysis of Chapter 3, it would appear that such a program, while ambitious, would be feasible. As a proportion of total Government spending education would rise from 20% in 1980/81 to 23% in 1990/91. After enrollment targets have been achieved at the secondary level, the development expenditures on education would slow down, and the proportion spent on education in the 1990s would, in all likelihood, begin to decline again.

6.42 An increase in public outlays for education of 12% a year in real terms would allow sufficient funds to handle the projected 5% a year increase in public enrollments, while at the same time ensuring the improvements in the quality of public education along the lines discussed earlier. It appears that recurrent expenditure per student has risen slightly in real terms since the beginning of REPELITA II for primary education, but fallen for secondary and higher education. If problems of teacher quality and shortages of textbooks are to be overcome, it will be necessary to substantially raise recurrent expenditures. A real annual growth of recurrent costs per student of about 5.5% would probably be needed to ensure a steady improvement in

/1 Public expenditure includes all government spending on education by the Departments of Education and Dalam Negeri; and INPRES Sekdah Dasar. Nominal expenditures have been deflated by the (non-export) wholesale price index.

**Table 6.4: COST PER STUDENT AND TOTAL EXPENDITURES
FOR PUBLIC SCHOOLS, 1974/75 - 1990/1991
(at 1980/81 prices)**

	Primary	Secondary Junior-Senior	Tertiary	Total	
<u>Costs per Student /a - ('000 rupiahs)</u>					
<u>Recurrent costs</u>					
1980/81	36	97	108	277	-
1990/91	62	165	184	473	-
<u>Capital costs</u>					
1980/81	83	500	638	3400	-
1990/91	123	739	946	5032	-
<u>Total Public Outlays/b - (billion rupiahs)</u>					
<u>Routine budget</u>					
Av. 1974/75 - 78/79	481	139	38	658	
1980/81	816	247	54	1117	
Av. 1984/85 - 88/89	1361	891	154	2405	
1990/91	1788	1604	295	3688	
<u>Development budget (billion rupiahs)</u>					
Av. 1974/75 - 78/79	120	27	35	27	209
1980/81	271	52	64	58	444
1984/85 - 88/89	49	478	288	313	1128
1990/91	47	170	603	580	1400

Source: /a 1980/81 data from Ministry of Education.
1990/91 projections by World Bank and UNESCO staff.

/b REPELITA II and 1980/81 data from Ministry of Finance;
REPELITA IV and 1990/91 projections by World Bank and UNESCO staff.

Note: (i) Recurrent expenditure for primary education is financed almost entirely from the Government's routine budget, while about 20% of recurrent costs on secondary and higher education is from the Development Budget. REPELITA II development and routine expenditures inflated by wholesale (non-export) price index and Jakarta cost of living index respectively.

(ii) It is assumed that school construction takes place in the year before occupancy and that teachers graduate in the year before they begin teaching. Teacher training costs are included under senior secondary and higher education.

Table 6.5: PUBLIC EDUCATION EXPENDITURES IN PERSPECTIVE

	Education expenditures as percent of total Government budget			As percent of GDP
	Development	Recurrent	Total	
Average 1974/75 - 1978/79	8	23	15	3.0
1980/81	11	26	20	3.4
Average 1984/85 - 1988/89	13	30	22	5.0
1990/91	11	33	23	5.6

Source: Table 6.4 and Annex I, Table 10.

quality./¹ Capital costs per student would also be expected to rise in real terms roughly in line with GDP per capita - 4% per annum.

6.43 Not only would a pattern of spending along the lines set out in Table 6.4 mean substantially higher outlays in real terms at all levels, but it would also mean a major shift in the distribution of funds. Secondary and tertiary education would receive about 45% and 15% respectively of the education budget, in contrast to REPELITA II when the total allocation to secondary and tertiary education was about 30%. As a result, the allocation for primary education would decline from 70% in REPELITA II to about 40% in the 1980s.

HEALTH

Recent Progress

6.44 Although a detailed assessment of changes in health status in Indonesia are hampered by data problems, there is no doubt that over the last decade improvements in the most comprehensive measures - life expectancy and infant mortality - have been dramatic. This progress is summarized in Table 6.6. Reductions in infant mortality and increases in life expectancy compare very favorably with other countries over the same period. Each year

¹ It is assumed that teachers' salaries, the main component of recurrent expenditure will rise more rapidly than average incomes throughout the economy (estimated at 4%, per annum). This will be required if sufficient qualified candidates are to be recruited, and the resignation rate reduced.

in the 1970's, infants could on average expect to live over eight months longer than infants born in the previous year. This progress was probably over 50% greater than the average for all low-income countries./1 However, the levels of these indicators in Indonesia remain less than satisfactory in comparison with countries at similar levels of per capita income; average life expectancy in low and middle income countries is 57 and 61 years respectively, compared with 53 in Indonesia./2

Table 6.6: INFANT MORTALITY AND LIFE EXPECTANCY

Province/Island	Infant Mortality /a			Life Expectancy /b		
	1969	1978	% Decline	1969	1978	Years Increase
Java-Madura	137.6	104.0	24	47.1	53.1	6.0
West Java	159.4	132.2	17	43.5	48.0	4.5
Central Java	135.8	98.2	28	47.4	54.2	6.8
East Java	114.0	95.4	16	51.3	54.8	3.5
Jakarta	119.4	80.1	33	50.2	57.9	7.5
Yogyakarta	93.1	62.5	33	55.3	61.8	6.5
Sumatra	138.5	92.6	33	47.0	55.4	8.4
Kalimantan	139.3	106.1	34	46.8	53.8	7.0
Sulawesi	149.0	108.2	27	45.2	52.3	7.1
Eastern Islands	164.4	133.4	19	42.7	47.8	5.1
Indonesia	140.0	105.2	25	46.7	52.9	6.2

/a Per 1,000 live births.

/b In years, at birth.

Source: Calculations presented in Appendix II. Derived from 1971 and 1980 censuses.

/1 See e.g., World Bank: Health Problems and Policies in the Developing Countries; Staff Working Paper No. 412, August 1980, p.19.

/2 As would be expected, given relative income levels and health facilities, Indonesia still lags behind its ASEAN partners. At the end of the 1970s, average infant mortality rates and life expectancy were respectively 105 and 53 in Indonesia; 32 and 68 in Malaysia; 65 and 62 in the Philippines; 68 and 62 in Thailand; and 13 and 71 in Singapore.

6.45 Infant mortality rates fell substantially in all regions of Indonesia in the 1970s but regional differences remain marked and appear to have increased slightly over the period. Most striking is not the difference between Java (average 104 per thousand live births) and the rest of the country (average 106), but the difference within Java (West Java, 132; East Java, 95), and between urban and rural areas. Improvement was most rapid in Jakarta and Yogyakarta, both of which had started the period with low mortality rates. The highest mortality rates were found in the Eastern Islands.

6.46 These improvements in health status are, without doubt, in large part due to continuous Government efforts in recent years to systematically build up basic health services. Progress during the 1970s is in sharp contrast to the previous three decades. The period 1940-1955 had been marked by a sharp deterioration of health conditions. Smallpox, plague and cholera were epidemic; malaria, yaws and tuberculosis were widespread; and malnutrition and diarrheal diseases were ubiquitous. Following the Revolution, the Government mobilized efforts to combat the spread of specific diseases, but it was not until 1968 that any overall strategy for health development was formulated - as part of Repelita I. The policy of the Government since that time has been to emphasize the achievement of wide coverage of basic health services in both rural and urban areas. By and large Indonesia has avoided the development of an elite, urban-oriented health service; for example, large modern reference hospitals, which typically receive most attention in other developing countries, have not been overexpanded or overequipped.

6.47 By almost every measure, the provision of health care facilities has dramatically improved in recent years. For example, the total number of health centers has risen from 1,058 at the beginning of Repelita I to about 5,000 at the end of 1981. Every kabupaten will soon have a hospital and every Kecamatan already has at least one health center (Puskesmas), and often more. In addition there are now about 10,400 subhealth centers and health posts, and about 1,200 hospitals with about 100,000 beds. The development of health manpower has paralleled the pace and direction of infrastructural growth. During Repelita II, there was a remarkable increase in the number of health workers, with an approximate doubling in almost all categories. Since then, emphasis has been given to improvement in the quality of training and rationalization of numerous categories of paramedical workers.^{/1} Health sector growth is also reflected in the consumption of drugs, which has grown by 15-20% annually since 1969.

^{/1} For example 24 categories of nursing training have been consolidated into two.

Total drug consumption was estimated at \$450 million in 1980./¹ Of this amount about 15% was financed by the public sector and 98% of all drugs were produced in Indonesia.

Issues for the 1980s

6.48 The basic question concerning the future directions for the health service are similar to that in education - whether priority should be given to further service expansion or to improvements in quality and utilization. On the other hand, despite rapid expansion, the quantity of facilities remains low by international standards. For example the ratio of doctors to population (5.5 per 100,000) is less than half that in Thailand (12 per 100,000) and about one-fifth of that in the Philippines, India, Pakistan and Sri Lanka (32, 24, 26 and 25 per 100,000 respectively)./² On the other hand, existing facilities are under-utilized and management capacity in the sector is strained. This section raises three issues that have important implications for future investments in the sector.

6.49 Underutilization of Facilities. Despite the impressive numbers of health centers now in place, they do not always provide the intended services and they are greatly underutilized. The out-patient load generally ranges from 14 to 63 persons per day. Apparently about 26% of the population who are ill do not seek assistance at all and, of those who do, only about 50% use health centers and hospitals, while the rest use traditional methods or private care. Maternal and child health services provided by the Puskesmas reach less than 42% of babies born, and less than 11% of under-fives. Hospitals, particularly at the kabupaten level, are also chronically underutilized with an average bed-occupancy rate of less than 50%. There is no simple reason for underutilization, /³ but one important factor is the low quality of service. Many district hospitals, particularly in the outer islands,

/1 The main categories of drugs sold in 1980 were: antibiotics (25% of total sales), vitamins, minerals and tonics (11%), and prescriptions for respiratory infections (9%).

/2 In terms of auxiliary and paramedical staff, the contrast is not as severe. Indonesia remains well below Thailand, Philippines, India and Sri Lanka, but above Pakistan.

/3 Underutilization of facilities is common to almost all East Asian countries for social and cultural reasons - although the problem is generally not as acute as in Indonesia. This is in sharp contrast to other areas in the developing world.

function poorly. In order to remedy this the Government has embarked on a crash program to re-equip hospitals at an initial cost of Rp. 50 billion over the three year period (1981/82 - 1983/84). In addition there is a lack of appropriate paramedical manpower; only 60% of the Puskesmas have adequate supporting staff. However, the most important reasons for low utilization are of a social and cultural nature. Recognizing that conventional methods of health care delivery were not meeting the needs of the rural poor, the Government in 1977 initiated a program of primary health care and education.^{/1} Voluntary primary health care workers (PROKESA) are trained to operate at the village level, each overseeing the basic health needs of 100 people; they are supervised by primary health care nurses, based at the Puskesmas. By the end of Repelita III the goal is to train 100,000 health workers, covering 6% of the population, complemented by 22,250 primary health nurses. By that time 6% of the population would be covered by these services.

6.50 Health Service Management. Over the last two years inadequacies in the management of the health sector have become a major concern to the Government. The rapid pace of service expansion in general and the introduction of lower level auxiliary-based health care (which tends to be administration-intensive) in particular, has placed severe strains on the management of the system to the extent that it has now become a major constraint on future progress. Three principal problems can be identified. First, the key managers at the district level, the DOKABUs (Doktor Kabupaten) are often ill-equipped for the task.^{/2} Second, partly due to these weaknesses in regional management, decision-making and control tends to be highly centralized in Jakarta, leading to delays and other inefficiencies. Third, the management of the health services support system such as the logistics of drug supply, in service training, and technical and administrative supervision, is very weak, particularly at the kabupaten level.

6.51 The Pattern of Mortality and Morbidity. Over the coming decade it will be necessary for the health service to adapt to a changing disease structure associated with economic growth and successful social programs. Three elements are involved here. First, the age structure of the population is changing. For example, the percentage of the population in the 0-4 years age group fell from 16.1% in 1971 to 14.1% in 1980. The number in the 5-9

^{/1} This program is known as Pembangunan Kesehatan Masyarakat Desa (Village Community Health Development)

^{/2} Although qualified as doctors, the DOKABUs receive no training in management.

age group exceeded the 0-4 group for the first time.^{/1} This is a direct result of successes in the family planning program - the fertility rate fell 21% in the 1970s ^{/2} - and in increasing longevity. Thus, while childhood diseases of the infectious type will continue to prevail, and only gradual changes are occurring,^{/3} there is already a tendency for diseases of aging and trauma to increase. This pattern has been observed in other Southeast Asian nations who have experienced economic growth and have controlled the infection and nutritional problems associated with infants and children. Its importance should not be underestimated, since the medical costs of treating chronic diseases and acute trauma are high and difficult to control; treatment and prevention requires a high level of public health and hospital technology. Second, urbanization is a major factor affecting the pattern of disease. It is associated with new occupational hazards, greater contact with motor vehicles, social dislocation, and crowding. On the other hand urban areas characteristically offer higher incomes, better access to health care and family planning facilities, more diverse diets and greater educational opportunities. Combined, these two influences imply very different health service needs in the large cities than in rural areas;^{/4} this underlines the need for decentralized regional planning (para. 6.50). Third, further reductions in mortality are likely to be more difficult and expensive to achieve than those in the last decade. International evidence suggests that, while a reduction in infant mortality from 150-200 per thousand to the 100-120 level requires only modest investments in health infrastructure, further reduction to levels around 50-60 require a major new expenditures.

^{/1} In 1971, there were 300,000 more children in the 0-4 group than in the 5-9 group. In 1980 there were 500,000 less in the 0-4 group than in the 5-9 group.

^{/2} The number of children aged 0-4 per 1,000 women in the 15-49 year age group fell from 730 in 1971 to 569 in 1980.

^{/3} The 1980 household morbidity survey indicated that patterns of diseases do not differ significantly from those during Repelita I and II. Virus infections (notably influenza) account for the majority of illness, followed by respiratory infections (including tuberculosis), skin diseases, diarrhea and water borne diseases. There has been a slight and gradual decline in water related infectious diseases and a relative increase in viral and respiratory diseases.

^{/4} Provincial health needs already vary considerably. For example the percentage of the population in the 0-4 age group was 17.4% in Southeast Sulawesi in 1980, compared with only 10.4% in Yogyakarta.

Targets for the Future

6.52 The Department of Health has formulated a long-term development plan which outlines specific "quality of life" targets for the year 2000./1

- These include:
- average life expectancy to rise to at least 60 years;
 - infant mortality to fall to a maximum of 45 per 1000 live births;
 - percent of underweight babies/2 to fall from 14% to 7%;
 - diarrheal morbidity rate to fall from 400 to 200 per 1000;
 - areas with high incidence of malaria in Java and Bali to fall to 25% of 1980 levels;
 - prevalence of tuberculosis to fall from 3 to 2 per 1000;
 - mortality of neonatal tetanus to decline from 11 to 1 per 1,000 births;
 - protein energy malnutrition in the under five age group to fall from 30% to 10%.

This plan is less specific concerning the scale and composition of health services required to achieve such goals. A few specific targets for health services for 2000 were established however, including:

- immunization coverage for children under 14 to rise from 40% to 80%; and
- deliveries attended by trained personnel to rise from 40% to 80%.

The plan also called for a restructuring of the National Health System, an upgrading of health service quality and for specific consideration of the changing pattern of mortality and morbidity discussed in para 6.51 above. It is unlikely that these goals can be reached without a substantial increase in financial allocations to the sector, an issue to which we now turn.

Financing Health Care

6.53 The system of health care finance in Indonesia is characterized by three features: first, its complexity, due to the variety of funding sources and channels; second, the low level of public expenditure in relation to total budget expenditures and GNP; and third, the important role of the private sector in both the provision of services and finance. Table 6.7 illustrates these features.

/1 A National Committee was established for this purpose in 1979 and a final report was submitted in early 1982: Rencana Pembangunan Jangka Panjang Bidang Kesehatan, 1980-2000 (Long Term Health Development Plan); National Health System Secretariat, Ministry of Health, February 1982.

/2 Define as 2,500 grams or less.

6.54 Public expenditures are dominated by Central Government allocations through the development, routine and INPRES budgets. Between 1974/75 and 1982/83 funds from these sources have increased ten-fold in current price terms, representing a real increase of over 200%, or an average annual real growth rate of about 16%. In 1976, public expenditure on health was equivalent to about 0.7% of GDP, about half the average for developing countries as a whole.^{/1} Since that time, the percentage has risen to almost 1.0%, while for many countries it has fallen. However, the budgetary priority given to health remains inadequate; the sector receives less than 4% of total Central Government expenditure, compared with an average of about 6% for other East Asian countries and for developing countries as a whole.

6.55 As in the provision of education, the private sector plays a very important role in supplementing public facilities. It is estimated that about 65% of total health sector finance is derived from non-government sources.^{/2} Data on total resources, both public and private, allocated to health care are not available for many countries. Table 6.8 compares health expenditures in Indonesia with some of those countries for which estimates have been made. The comparison strongly suggests that allocations to health in Indonesia should be raised in both absolute and relative terms. It has been estimated that public expenditures of between 1.0% and 2.5% of GNP are required to provide comprehensive basic needs health facilities in developing countries. The appropriate allocation within that range depends on the existing stock of physical facilities and the contribution of the private sector. In the light of the current low level of facilities in Indonesia, it will probably be necessary for public expenditure in the sector to be targeted to reach a minimum of 1.5% of GDP by the end of the decade ^{/3} if the health care goals described above are to be achieved. This would require an average annual real growth of over 12% throughout the decade. This expansion would permit the following allocations within the health sector:^{/4} Priorities for new funds could be given to endemic and

^{/1} See World Bank: Health Sector Policy Paper; 1980, Annex 3.

^{/2} See Table 6.8. This estimate of private expenditure on health is equivalent to 3.2% of total private consumption expenditure. By way of comparison, a recent survey of three countries found private sector financing of health care to range from 13% in Tanzania and 26% in Botswana, to 76% in Pakistan.
World Bank: Health Problems and Policies in the Developing Countries; Staff Working Paper No. 412, August 1980.

^{/3} These targets exclude rural water supply facilities, which will be separately discussed in a later section.

^{/4} The following potential achievements are based on an analysis of the 1981/82 health sector budget.

Table 6.7: ESTIMATES OF PUBLIC AND PRIVATE HEALTH EXPENDITURE: 1980/81

PUBLIC EXPENDITURES			PRIVATE EXPENDITURES (estimates)/a		
Type of Budget	Rp. billion	% of total public	Category of Expenditure	Rp. billion	% of total Private
National Development Budget	178 (78)	40.1	Hospitals	171	21.7
INPRES Routine	(50)		Non-Hospital Treatment	304	38.5
Crash Programs	17	3.8	Drugs	270	34.2
Foreign Assistance	25	5.6	Laboratories	19	2.4
Subsidies to Regions (SDO)	65	14.6	Health Training	4	0.5
Provincial Budget Development Routine	14 (3) (11)	3.2	Civil Service Insurance	21	2.7
Kabupaten Budget Development Routine	10 (2) (8)	2.3			
Other Departments and State Enterprises	56	12.6			
Family Planning Board	79	17.8			
<u>TOTAL PUBLIC</u>	<u>Rp 444 b</u>	<u>100.0</u>	<u>TOTAL PRIVATE</u>	<u>Rp 789 b</u>	<u>100.0</u>
		As % of GDP /b	<u>PER)APITA EXPENDITURE</u>		
	Public	1.0	Rp. 3,020	\$ 4.83	
	Private	1.8	Rp. 5,367	\$ 8.59	
	Total	2.8	Rp. 8,388	\$13.42	

Source: World Bank: Indonesia - Health Sector Review Update; forthcoming 1982, adapted from Ferster G.: Financing the Health Sector in Indonesia; forthcoming 1982. Estimates of private expenditures are preliminary and necessarily rough.

/a This refers to total private expenditures on both privately and publicly supplied services.

/b These are probably overestimates. Health expenditures relate to 1980/81; GDP is for 1980.

epidemic disease control (which could grow at about 20% p.a.), drug production (18% growth p.a.), immunization (20% growth p.a.), and health manpower development and maintenance of facilities (10% growth p.a.). In addition this expansion would finance the continued construction of 200 new health centers and 2,000 subcenters annually for the next three or four years. During the decade 160 additional kabupaten hospitals could be built or rehabilitated and 3 regional hospitals could be constructed.^{/1} While the rate of growth of capital investment in the sector may be expected to fall in the second part of the decade (see Annex I, Table 10), it will be necessary for recurrent expenditures to continue to grow rapidly (over 10% p.a. in real terms) throughout the decade.

6.56 If the present rapid rate of expansion is to continue it will be necessary to simplify the system of finance. The present complex system already places an unnecessary burden on health care administrators, and this is likely to increase as the system expands. The present system has been designed out of necessity. In view of the weak financial basis of regional and local authorities, it has been necessary for the Central Government to provide funds for routine as well as capital expenditures. A multiplicity of budgets exist at all levels of central and local Government and any particular item of expenditure may be financed from several sources;^{/2} indeed it is seldom that a program or activity is financed entirely from one source or even from one level of Government. This situation is exemplified in the financing of health centers. The Puskesmas are normally owned and managed by the kabupaten and a budget specific for the unit exists in the Dinas Kesehatan. However, salaries of Puskesmas personnel may be paid from the national health budget, from provincial development or provincial routine budgets, or from kabupaten routine or development budgets. Additional funds for remuneration may come from ASKES or from the National Family Planning Board. Any individual may receive his salary from a variety of sources. The same complexities occur in the financing of drugs and equipment. Nowhere is there a consolidated statement of the cost of operating a Puskesmas or of its component activities, and the same is true of the kabupaten hospitals and other programs.^{/3} Such a system tends to have three disadvantages: it strains the administrative capacity at the local

^{/1} In line with the changing structure of diseases in Indonesia (para. 6.51), it will be necessary for some of these new hospitals to specialize in certain physical and mental illnesses, in contrast to the main existing pattern of general hospitals.

^{/2} A similar situation arises in education (para. 6.37); however the problem is particularly severe in the health sector.

^{/3} See e.g. Wheeler M. and J. B. Volpatti, Health Service Finance; paper prepared for a Seminar on Regional Finance, September 1980.

Table 6.8: HEALTH EXPENDITURES AS PERCENTAGE OF GROSS DOMESTIC PRODUCT

	<u>Developing Countries</u>			<u>Industrial Countries/c</u>			
	<u>Public/a</u>	<u>Private/b</u>	<u>Total</u>	<u>Public</u>	<u>Private</u>	<u>Total</u>	
India	1.2	2.1	3.3	Australia	5.0	1.5	6.5
Pakistan	0.6	1.5	2.1	Belgium	4.2	0.8	5.0
Philippines	0.7	1.5	2.2	Canada	5.1	1.7	6.8
Sri Lanka	1.9	1.2	3.1	Netherlands	5.1	2.2	7.3
Ghana	1.3	2.9	4.2	Sweden	6.7	0.6	7.3
Sudan	0.9	2.5	3.4	United kingdom	4.6	0.6	5.2
Honduras	2.8	3.2	6.0	United States	2.4	3.9	6.3
Indonesia/a	1.0	1.8	2.8				

/a 1976 data, /b 1970 data, /c 1973-75 data, /d 1980-81 data.

Source: International Labor Organization: Some Distributional Issues in Planning for Basic needs Health Care ; Research Working Paper, Provisional 1979; World Bank: Health Sector Policy Paper; 1980; and Table 6.7.

level; it encourages waste and corruption by reducing accountability; and it hinders effective management. This last point is particularly important; the lack of correspondence between specific functions and specific budgets makes it very difficult for managers to effect reallocation decisions. This is because each manager controls only part of the resources required for each activity. Nobody, therefore, has the authority to plan or manage the system as a whole. The Government is aware of these problems and is exploring ways for improving the linkage between managerial and financial responsibilities. Specifically it is planned that, as the provincial and kabupaten revenue is base strengthened, and as the quality of financial management at the local level is gradually improved, the local governments will take over full authority for all recurrent expenditures.

FOOD AND NUTRITION

6.57 Like education and health, adequate nutrition must be regarded both as an objective in its own right and as a means of economic progress. The nutritional status of the population both influences and reflects the level and pace of national development. Inadequate diet and related illness can profoundly interfere with learning ability, capacity to work, behaviour, and general well-being. A discussion of food and nutrition is therefore an essential complement to the other areas of human development included in this chapter. However, problems of nutrition differ from those in education, health, housing, and water supply in an important way, in that they do not find solutions primarily in the expansion of Government services. Nutritional deficiencies are not, for the most part, caused by inadequate facilities. Rather, poverty and the poor health and education associated with poverty are the primary cause of malnutrition; and policies and programs that raise the incomes of the poor and to improve food availability are the best cure. Unlike the other sections in this chapter, therefore, this section will not include estimates of the financial resources required to achieve certain targets over the coming years. Instead, emphasis will be given to policies designed to encourage food production and to improve the efficiency of its distribution and to programs targeted at specific micro-nutrient deficiencies.

6.58 Although a few adjustments to present policies are suggested, this section does not recommend any fundamental new directions in the food and nutrition field. Indonesia is entering the 1980's with a record of substantial progress in this area over the last decade. The Government has set for itself an ambitious and well conceived set of tasks in the third five year plan, and it now appears that most of these will be accomplished, particularly those dealing with food production and consumption.

Nutritional Status

6.59 There are four major nutritional problems in Indonesia. Protein-energy malnutrition (PEM), vitamin A deficiency, iodine deficiency, and nutritional anemia. Of these, the first is the most prevalent and has the most far-reaching consequences on welfare and development. It is also the most difficult to solve because of the complexity of the factors that lead to it, and because of the size of the problem. Statistical data on recent changes in PEM are poor. Currently there is much infant and child weighing and measuring being undertaken, but few reliable results are yet available. The only national survey of pre-school malnutrition in recent years found that in 1976-77 23% were malnourished in West Java, 28% in the rest of Java, 20% in Sumatra, 27% in Kalimantan, 18% in Sulawesi, and 21% in Bali and Nusa Tenggara. Indirect indicators such as infant mortality rates (Table 6.6), and food availability data (see next section) suggest that progress since that time has been good.

6.60 The three major micro-nutrient deficiencies have more specific causes and solutions. The lack of Vitamin A leads to blindness in children; the lack of iron leads to iron deficiency anemia which has been proven to lower worker productivity, and the lack of iodine leads to goiter and can contribute to cretinism. Little recent data on incidence is available. However, 1973-74 data show vitamin A deficiency (in the form of xerophthalmia) among 4-5% of children in rural Java and over 20% in urban squatter areas. The Ministry of health estimated that in 1979, 45,000-60,000 children aged 0-5 suffered from blindness, 1.5 million children had clinical lesions, and 15 million persons had some form of eye problems. Iron deficiency anemia was found in 28-52% of male workers and 35-85% in non-pregnant women. (Among pregnant women it was higher, from 50-92%). Iodine deficiency is very region-specific, with over 50% of those surveyed in North and West Sumatra, East Java and Bali showing signs of goiter. A 1973 study indicated there were about 100,000 cases of cretinism and half a million cretinoids.

Food Production and Availability

6.61 There are three major goals which are of particular concern to the Government with respect to food policy: to increase the levels of food output and consumption; to satisfy basic needs with respect to food and nutrition; and to diversify the diet so as to avoid excessive reliance on rice. Progress towards the first goal and apparently also towards the second has been notable. Rice, the primary staple, has registered impressive output gains in recent years, having recovered from the near stagnation of 1973-77. Production was about 22.3 million tons in 1981, compared to an average of 15 million tons in 1973-75 and 13 million tons in 1969-71.^{/1} The annual rate of growth of about 4.5%^{/2} is well over the annual 2.3% population growth. Total food output, as measured by constant price GDP, rose 50% from 1970 to 1980, a per capita gain of 19%. The apparent consumption of major staples (rice, corn, cassava, sweet potato and wheat) increased from 160 kg of rice equivalents per capita in 1970 to 186 kg in 1980, a 16% gain (see Table 6.9). Total food availability in Indonesia is now more than sufficient to meet average nutrition requirements of all people, but distribution continues to be a problem.

^{/1} It appears that about one quarter of the gain in rice production over the last decade can be attributed to increases in area planted, with the remainder due to increased yields. Total harvested area under rice and yields per hectare grew at average annual rates of 1.0% and 3.1% respectively between 1970 and 1980.

For a detailed analysis see World Bank: Indonesia - Policy Options and Strategies for Major Food Crops, 3686-IND; forthcoming.

^{/2} The "least squares" estimate for 1970-81.

Table 6.9: APPARENT CONSUMPTION OF STAPLE FOODS IN INDONESIA
('000 tons)

	1970	1975	1980	Annual Average Growth rate 1970-80
Rice	12,720	14,710	19,670	4.46
Corn	2,457	2,692	3,000	2.02
Cassava	9,612	12,243	11,275	1.61
Sweet Potato	2,175	2,433	2,025	-0.71
Wheat Flour	355	516	1,161	12.58
Total (in rice equivalents)	<u>18,584</u>	<u>21,728</u>	<u>27,261</u>	3.91
Per capita intake (in rice equivalent)	<u>160</u>	<u>165</u>	<u>186</u>	1.52

Note: Based on production and imports less exports, feed, seed and waste. BULOG stock changes of rice are also included. No adjustment is made here for nonfood industrial use of cassava, storage losses, or waste within the home. Rice is multiplied by 1.0; corn by .97; cassava by .268; sweet potato by .26; and wheat flour by .956 to calculate rice-equivalents. Flour is calculated as 72% of wheat imports.

6.62 Per capita calorie availability also appears to have risen considerably. Although no food balance data are available for 1980 it appears that average per capita calorie availability was about 2,500 per day, well above the 2,097 estimated for 1970, and 2,231 for 1976.^{/1} It now stands significantly above the estimated minimal requirement of 2100 calories per day.^{/2} Of course, adequacy of average availability does not imply adequate

^{/1} 1970 and 1976 data from food balance sheets. 1980 figures derived from growth in food production.

^{/2} Based on FAO/WHO recommendations and the distribution and body weight of Indonesians, calculated in Sajogyo: Tingkat Pendapatan Rumah Tangga dan Kecukupan Gizi; Widya Karya Nasional Pangan dan Gigi, Bogor; July 1978. The daily calorie availability requirement figure of 2100 corresponds to an actual daily intake requirement of 1900 (see Table 6.11). The difference between these two numbers is accounted for by normal household losses of about 10%.

availability for all. Whether or not the poorer groups of the population are able to purchase adequate nutrition depends upon the availability and price of the cheaper non-rice staples. Indonesia is one of the few developing countries that has systematically collected food consumption data by income group (SUSENAS), which can give valuable insights into the nutritional status of the poor.

Table 6.10: RELATIVE CONSUMPTION OF FOOD CROPS ACCORDING TO INCOME LEVEL - RATIO OF AVERAGE CONSUMPTION OF POORER HALF OF POPULATION TO THAT OF THE RICHER HALF

	Rice	Corn	Cassava	Wheat Flour	Sugar
Java-Madura					
Urban	0.59	1.35	1.12	/1	0.5
Rural	0.85	2.50	1.24	0.33	0.6
Off-Java					
Urban	0.63	1.36	0.86	0.14	0.5
Rural	0.76	1.74	0.74	0.22	0.5

/1 Insignificant. All figures rounded.

Source: Calculated from: SUSENAS V, Pengeluaran Untuk Konsumsi Penduduk, 1979.

Table 6.10. shows that the composition of food intake differs substantially according to income level, particularly in rural areas. While rice is overwhelmingly dominant in urban areas and in middle income households (over 90% of total staple food calories), secondary crops (corn and cassava in particular) play an important role in rural areas and in households with below median incomes, supplying about a third of total staple food calories for the group as a whole and much more than that among the very poor. Table 6.11. which presents calorie and protein intake by income group shows, however, even by consuming high proportions of the cheaper foods, the poorer groups remained malnourished in 1976 (the most recent available data). At that time, almost 40% of the population were apparently receiving insufficient calories and protein. Since then, nutritional status has probably improved at all income levels. If it is assumed that calorie and protein intake of the poorest 40% grew at the same rate as overall food consumption (which roughly

corresponds with per capita expenditure growth of the poorest 40%),^{/1} over half of the group have now "graduated" above the minimum level. However, this still leaves about 15% of the population, or over 20 million people, receiving insufficient food. Although it is not clear exactly who these people are, they are probably mainly in rural areas, often in the non-rice growing regions, and often landless. They are the "hard core" of the poverty problem. They are, for the most part, the same people who do not

Table 6.11: CALORIE AND PROTEIN INTAKE BY INCOME GROUP - 1976

Expenditure Group (Rp per capita per month)	% of total population	Per-capita daily consumption	
		Calories (kcal)	Protein (grams)
Less than 2000	15.3	1381	22.2
2000 - 2999	23.8	1870	32.3
3000 - 3999	19.5	2034	40.2
4000- 4999	13.6	2084	47.0
5000- 5999	8.8	2280	52.7
Over 6000	19.0	2760	69.2
Average intake <u>/a</u>	100%	2064	43.3
Minimum intake requirement		1900	39.2
Average availability		2231	

Source: Hutabarat: Proyeksi Distribusi Konsumsi Kalorie Menurut Kelompok-Kelompok Pendapatan di Indonesia Tahun 1990; Sekolah Pasca - Sarjana IPB 1979.

/a Underreporting of food consumption is believed to occur in the 1976 SUSENAS for the lower income groups, although the extent of this is not known. The average for all income groups (2064) is consistent, however, with the estimated availability figure (based on food balance sheet data) of 2231 for that year. Household losses of about 10% are considered normal and account for the differences between actual intake and availability numbers.

/1 Preliminary results from the 1980 SUSENAS indicate that real expenditure of the poorest 40% of the population grew at an average annual rate of 5.5% between 1978 and 1980.

have good access to health and educational facilities, they have poor housing and inadequate water supply and sanitation. The principal key to their problems lies in increased purchasing power, which underlines the need for policies and programs designed to promote off-farm employment, described in the previous chapter. In the short and medium term their situation calls for expanded nutrition programs directed towards the most vulnerable members of this group.

6.63 Progress towards the third goal - diversifying the diet - is difficult to assess. On the one hand relative dependency on rice has increased as the share of rice in total staple food consumption is slowly increasing (from 68% in 1970 to 72% in 1980). On the other hand, the share of non-staple food consumption (vegetables, fruit, meat, sugar, eggs, dairy products etc.) in total consumption is also increasing with rising average income levels. The distribution of non-staple food consumption over different income groups is, however, not fully documented and changes over time are difficult to trace, partly because of the great diversity of non-staple food items and their different units of measurement. On the whole it seems likely that with continuing income growth and a reasonably stable income distribution pattern, the share of rice and wheat in total staple consumption will continue to increase, (mainly at the expense of maize, cassava and sweet potatoes), while at the same time the share of non-staple food (vegetables, etc.) in total food consumption will continue to rise at the expense of staples. In other words the observed changes in food consumption patterns reveals declining diversification of the diet as far as staples are concerned and increasing diversification of the total diet.

Food Policies and Programs

6.64 While it is difficult to determine how much of the recent success in rice production has been due to particular factors it is clear that the Government role has been central. In particular it has followed a pricing strategy highly conducive to the adoption of modern farming techniques; it has provided expanded infrastructure and support services; and it has encourage the development of an efficient marketing and distribution network, principally through the National Logistics Board (BULOG), the cooperatives (KUD's), and the National Fertilizer Company (PUSRI). These policies have resulted in impressive gains in food availability and in rural incomes in many areas. However many smaller rice farms and most non-rice producers are still using traditional techniques and inputs, and consequently continue to suffer from low productivity. It is among these families (both small land owners and laborers) that nutritional problems are often most severe. Their problems cannot generally be solved by nationally organized agricultural services or by price incentives alone. Complex questions are involved in these areas; this report looks at two of the issues involved: the role of pricing strategy in improving the availability of food and in raising nutritional standards, and the role of village level cooperatives in improving food security and in raising output, particularly with regard to the lowest income groups.

6.65 Pricing Strategy: There are two well-known difficulties in designing a food pricing strategy. First, lowering prices to benefit consumers tends to discourage production. Second, subsidized prices intended to help the poor, generally benefit the middle and upper income consumers even more, and therefore tend to be cost ineffective. The Government has successfully avoided the first of these difficulties. Indonesia's pricing policy has included three key elements in recent years. First, consumer prices for rice have been allowed to rise gradually at about the same rate or slightly lower than the overall consumer price level. Second, prices of a number of secondary crops have been supported and stabilized, at least in selected areas, to encourage production and protect producer incomes. Third, to avoid the adverse supply effects of a low consumer rice price, the gap between the BULOG buying and selling price for rice has been narrowed /1 and inputs have been subsidized, undesirable side effect of a declining ratio of ceiling to floor price 1.35 in the early 1970s to about 1.1 to 1.15 in 1980-81 - has been to discourage private storage of rice, and thus to increase BULOG's storage role./2 BULOG's procurement is quite sensitive to the controlled ratio of buying to selling price. Econometric testing suggests that much of the recent expansion of BULOG activities has been substituting for reduced private storage./3 There now seems to be a good case to widen the margin between Government guaranteed buying (floor) and selling (ceiling) prices so as to encourage private storage. Other measures towards this end, worthy of Government consideration, are to allow buying prices to creep up during the harvest season and to permit larger regional price differentials.

6.66 Government pricing policy has undoubtedly contributed to the rapid spread of new agricultural techniques and the acceleration in the use of modern inputs. Subsidized fertilizer prices have played a particularly important role. The relative price of a kilo of rice to a kilo of urea rose from

/1 Over the last ten years this has permitted producer prices to rise slightly faster and consumer rice prices slightly slower than overall consumer inflation.

/2 However, this is not to argue that the expansion of BULOG's facilities has been random or unplanned. The growth in BULOG's storage capacity was initiated out of a concern to maximize food security following the 1972 shortages.

/3 A strong relationship between BULOG procurement and the ratio of the buying price to the selling price for rice has been established. See e.g. Indonesia - BULOG and Price Stabilization Policy, World Bank, mimeo, 1981.

0.86 in 1976 to 1.7 in 1981./1 This together with the Government's policy of allowing an important role to private traders in the distribution of agricultural inputs, has caused the growth of fertilizer use to accelerate from about 13% p.a. in the first half of the 1970's to almost 20% p.a. between 1976 and 1981. In 1981, fertilizer consumption, estimated at 2.65 million tons, was 23% higher than in 1980. However, this was achieved at the cost of high and growing subsidies on fertilizer. The retail cost of Rp 70/kg, which has remained unchanged since 1977, is now well under half the world price, and requires an annual budgetary subsidy (in 1981/82) of around \$500 million. Some observers believe that application rates in many parts of the country are now at or above appropriate levels /2 and therefore recommend raising the fertilizer price, at least in line with inflation.

6.67 Government food pricing policies have meant that domestic rice prices have not necessarily borne any close relationship to international rice prices, although over the last three years the former have usually been 15-30% below import equivalent prices./3 Secondary crop prices in domestic markets have generally been significantly above import equivalent prices. Corn in particular has been protected from world market influences with domestic prices hovering at least 40% above import equivalent levels./4 Government purchase prices are shown in Table 6.12. Under this pricing structure there is a possibility of an emerging "mismatch" between supply and demand for rice and supply and demand for other food crops. As incomes rise, consumption of rice increases rapidly while that of secondary foods tends to rise slowly or actually decline./5 At the same time, production of crops

/1 In addition, the low absolute price of fertilizer has permitted an increasing number of small farmers to pay cash rather than borrow. Another important factor encouraging distribution was the removal of restrictions on private trade in fertilizer in 1977.

/2 The average nutrient application rate for foodcrops for the country as a whole is about 95 kg per ha (1981) compared with a recommended rate of 115 kg per ha. See World Bank: Indonesia - Second Fertilizer Distribution Project; Staff Appraisal Report, draft September 1981.

/3 Good harvests in 1981, including in Indonesia, caused world rice prices to fall substantially and in December 1981 the domestic price was actually above the import equivalent price. (Comparison based upon Thai rice (35% broken) plus transport and marketing costs.)

/4 In 1981, soyabean price in domestic markets also diverged greatly from international levels, exceeding import equivalent prices by over 70% at the end of the year.

/5 For a detailed discussion see World Bank: Indonesia-Policy Options and Strategies for Major Food Crops, op. cit.

Table 6.12: GOVERNMENT PURCHASE (FLOOR) PRICES /a
(Rupiah per kg)

Crop	1977	1978	1979	1980	1981	1982
Rice /b						
Paddy (gabah)	72	77.5	97.5	111	128.5	146
Milled (beras)	110	119.5	158	175	195	214
Corn /c	-	42.5	45	70	103	113
Soyabeans/c	-	-	-	217	251	283
Mungbeans/c	-	-	-	267	303	325
Peanuts/c	-	-	-	307	405	443

/a Guaranteed floor prices for bagged commodities of standard quality and moisture delivered to BULOG warehouses, by cooperatives (KUDs). Rice prices effective on February 1 for years 1977-81; effective January 1 for 1982. Other crops are effective on November 1 of the preceding calendar year.

/b Purchase from farmer groups participating in the government's INSUS program received a premium of Rp 3/kg in 1981, and will receive at least this premium in 1982.

/c Unlike the paddy price, the Government guaranteed floor prices for most secondary crops are as yet only effective in selected areas, owing to the fact that BULOG is not yet in a position to handle the purchase and storage of those crops in all growing areas.

Source: BULOG.

such as corn is being encouraged, but consumption discouraged by high controlled prices. On nutritional grounds there is a good case for lower prices for corn and other secondary crops.^{/1} Setting domestic prices more closely in line with long-term trends in international prices may also have some desirable supply effects within the secondary crop sector. For example,

/1 Offsetting these considerations is a concern for the farmers' incomes. However in many parts of the country, corn producers also grow rice and declining income from corn could be offset by raising rice prices. It is not expected that the current depression in the world rice price will continue. It is therefore expected that BULOG's present rice price policy will still require substantial subsidies in the future.

it is likely that corn would gradually be replaced by soya, which has a higher yield per hectare, greater nutritional value and a higher income elasticity of demand./1 Wheat could also play a role in improving the nutritional status of the poor, even though it is currently consumed largely by middle and upper income urban dwellers. Wheat provides more nutrients (mainly protein) than rice and is generally about 40-50% cheaper on the international market. Currently the domestic price of wheat flour is higher than the import equivalent price due to very high domestic milling margins. In certain forms wheat products can be processed in such a way as to be more attractive to lower than higher income groups./2 For example, "composite" flours, in which wheat and cassava are mixed, have been successfully introduced in a number of countries, and could be considered as a good candidate for subsidies./3

Services for small-scale farming and the development of cooperatives

6.68 The proportion of total area under rice planted using "modern" techniques rose from less than 30% to 70% between 1970 and 1980./4 Without doubt, the nutritional status of many rural families has improved over the last decade as a result of higher and more stable incomes following the adoption of these new methods and the modification of existing cropping patterns. These improvements have been made possible by a major increase in the provision of agricultural services, including improved water supply and facilities for credit, extension, input distribution and marketing. Most of these have been organized by the Central Government; their continued expansion is essential. However, experience suggests that centrally-managed services can only effectively penetrate down to a certain level of farm size and have so far been more successful for rice than for other food crops. Thirty percent of the land under rice and most of the land under secondary food crops is still cultivated using traditional methods. Generally these areas contain the smaller and poorer farms. To reach very small landowners and wage earners near subsistence, it may be necessary to develop community-based organizations at the village level. Recognizing this, the Government has recently restated its commitment to the encouragement of cooperatives for the purposes of input distribution, marketing and, in some

/1 The Government's current efforts to encourage production and consumption of "tempe" and "tahu" (soya products) are important in this regard and could be expanded.

/2 Experience from other countries, notably Sri Lanka and India suggests that tastes for wheat products can be acquired very quickly

/3 The new Food Technology Development Center in Bogor could explore the feasibility of composite flours in Indonesia.

/4 In addition, biotypes resistant to brown plant hopper infestation, which were introduced only in 1975-76 now account for well over half of the total hectareage.

cases, storage. The rationale for this is discussed below. It should be stressed, however, that if cooperatives are to successfully carry out these functions, potentially major problems of management and efficiency associated with a significantly expanded role will have to be overcome.

6.69 It is well known that the poor often tend to be more conservative than the bigger farmers because they cannot afford to take risks. While a small-scale farmer tends to grow low input, low risk crops, primarily for his own subsistence, his more secure and larger-scale neighbour may grow higher risk crops such as fruits and vegetables for the market. The average return is much greater from the latter, but it is also less certain. Two elements are necessary to raise the productivity of the very small landowners. First, the return to the new agricultural methods or crop patterns must be made as certain and as high as possible; second, some fall back position must be available in the case of a crop failure. Community-based or cooperative ventures may have a role to play in providing these services.

6.70 With respect to the former, the cooperatives (KUDs) already play a major role in purchasing rice for BULOG, which has contributed to reducing price variations, an important consideration for many low-income producers and consumers. There is ample scope for cooperatives to become involved in the marketing of foods other than rice. Many garden-scale fruit and vegetable plots would benefit from participation in a collective marketing scheme, as would small-scale livestock producers. In all these cases, the present system may be competitive, but is often fragmented, undercapitalized, and suffers from high costs. Consolidation, and investment in good storage (including cold storage), processing, and forwarding facilities would lower costs and help reduce price fluctuations to both producers and consumers. The cooperative can also expand their role in helping small farmers to increase their productivity. They can provide seeds, fertilizer, pesticides, credit, and advice to members working on very small plots or similar inputs for small-scale livestock. For rice this has begun in the INSUS intensification scheme in which farmers groups are responsible for procuring inputs and for the marketing of produce. In addition, use of "bengkok" land ^{/1} for the landless has been suggested by some observers. If this were accepted, using the cooperatives to organize micro-plot intensification would be one feasible type of activity with a potentially high payoff for income and nutrition.

6.71 Cooperatives could also play an expanded role in the second area of concern to small farmers - the fear of falling below subsistence in the case of a poor harvest. If this concern could be eliminated, the farmer would perhaps be prepared to take productive risks. In some parts of the country,

^{/1} This land is operated by and for the use of the village head, originally in compensation for his services. Since 1981-82, village heads are directly paid by the Government as civil servants, so the bengkok land compensation is no longer needed.

notably Nusa Tenggara and East Java, the "Lumbung desa" village food storage system is being revived under the auspices of local community groups. In earlier years, these storehouses lent out food to villagers during the "paceklik" (hungry) season, to be repaid after harvest. Existing storage facilities for such crops as corn, dried cassava and sorghum is very much inferior to those for rice, although there are low cost, small-scale, easily learned technologies available for the simple processing and effective storage of these less preferred staples. In addition to raising returns to farmers and reducing interseasonal variations in the prices of these crops, a village-level cooperative storage infrastructure would also provide a proven conduit for relief supplies if quick action were needed following the failure of a crop. This function could be linked to the intervention proposed under the Nutritional Surveillance System, which is currently being planned.

6.72 Whether the cooperatives will be able to undertake these various activities successfully is not certain. The history of cooperatives in Indonesia has been marked by poor performance. They often failed to collect loans, or stimulate local development. Because the leadership was appointed from above, members' interests were often not well represented. Nonetheless, there appears to be a need for their services and recent policy changes which encourage hiring of well paid, qualified, and accountable managers are important improvements. Further provision of training, management support, and extension services to and through cooperatives is clearly required to increase further their effectiveness. It is also essential that cooperatives should not be set up with monopoly powers. Preserving alternatives is crucial to improving efficiency of service. If a cooperative is well-run, it will attract members and prosper; if not, villagers should not be forced to deal with it. An expanded, more effective role for cooperatives will require a major effort in upgrading the administration and staffing of the system. The skills needed to coordinate input distribution, extension advice, marketing, storage and processing are not easily or quickly taught. It may be necessary to tap existing private sector expertise in the short run while building up through apprentice and training programs a group of competent managers.

Specific Interventions to Improve Nutrition

6.73 Food Additives: Most of the above discussion relates to problems of protein-energy malnutrition. The micro-nutrient deficiencies described earlier also constitute a major public health problem for which more direct technical solutions exist. The challenge is to apply available techniques in a realistic way so that target populations have access to fortified foods. For vitamin A, the years of effort devoted to study and feasibility are about to bear fruit as the fortifications of MSG, a widely used flavoring agent, is about to begin. If expectations are met, this step should result in a large decline in vitamin A deficiency at low cost.

6.74 For iodine, a cheap and effective treatment of salt has long been available and it seems likely that diseases associated with iodine deficiency will soon belong to the past. A new Government decree was recently issued, jointly by the Ministers for Industry, Health and Trade, providing that all consumer salt marketed in Indonesia should be iodized by the end of REPELITA III (1984). Fortification requires the salt to be ground to a fine consistency, a step which involves some cost. Many small sea salt factories produce a cheaper salt which is less finely ground. It is necessary therefore either to switch consumer demand to the better salt (through subsidy or other means) or to iodize the cruder form of salt. For iron, it appears that the work in both India and Indonesia in recent years has led to an acceptable and effective iron fortified salt. Confirmation of this major technological breakthrough is likely to be received soon from the scientific community. While somewhat more difficult and expensive than iodization, per capita annual costs are low and the technology should be within reach of cooperatives or the national salt company. While mixing iodine and iron together is not feasible, it does appear that a coordinated initiative using fortified salt could greatly reduce both iodine and iron deficiency in Indonesia. Further study on this is needed.

6.75 Nutrition Services. There has been much experimentation in recent years with various kinds of nutrition, health and family planning services, and village-level workers are now active in over half of the villages in Indonesia. While a full review of past programs is not yet completed, some lessons are beginning to emerge. Most striking is the need for more and better trained village-level workers to improve service delivery and nutrition education. Village workers in health, nutrition and family planning (para 6.49) have overlapping duties and they can serve multipurpose roles so long as referral systems are available. This, however, will imply greater training for present village workers and an organization to allow them to refer people to more highly trained specialists outside the village.

6.76 Inoculation of children, oral rehydration, and nutrition surveillance through periodic weighing can be extremely useful in improving health and nutrition of vulnerable groups, but the present level and quality of these activities is deficient. Modest food supplements for pregnant and lactating mothers and young children are also needed, as these groups often suffer significant shortfalls in intake even when family income seems adequate. Improved training is a priority, from the village level workers to the central staff and directors. The village cadres need better initial training so that they more fully understand what they are supposed to do and who they can ask when in doubt. Periodic refresher courses, helpful supervision, and review of records would ensure better coverage and quality of service. Some training across narrow specialities is certainly needed so that a single worker could handle a variety of inquiries concerning health, nutrition, and family planning. Currently, only family planning workers are paid; other village workers are volunteers. Improved training and responsibility for village workers would imply a full time workload, and this may require a reconsideration of this policy.

SHELTER

6.77 Whereas the Government has made significant progress in improving the education and health status of the population in the past decade, progress towards satisfying basic needs in shelter has been more modest. By shelter we mean not only protection from the elements, but also a variety of essential services - housing, water supply, sanitation, and proximity to the work place. As in most countries, public sector involvement in the provision of shelter to urban areas has received a higher priority in Indonesia than rural shelter. There are a number of reasons for this. First, private initiative in the provision of shelter can be relied upon more in rural areas than in urban, where the concentration of population often requires collective or public solutions. Second, as has been observed in other developing countries, low-income residential areas in cities, while initially similar in quality to those in rural areas, often become the locus of a general deterioration of living conditions, requiring corrective action by the authorities. Finally, the absolute need for shelter is growing faster in urban areas than rural.

6.78 Between 1971 and 1980 the urban population of Indonesia grew at an estimated average annual rate of between 4% and 5% /1 well over twice the rate of population growth in rural areas. In 1981, the urban population stood at 32.8 million representing 22.4% of the total. By international standards Indonesia's urban growth rate is high. The total urban population of low and middle income countries grew annually at 3.7% and 3.8% respectively in the 1970s. The acceleration of the urban growth rate in the last decade is mainly due to the slow employment growth in agriculture and to the concentration of new investment in the modern sectors in and around the large cities./2 Since income differentials between urban and rural areas appear to be increasing,/3 it is reasonable that the Government's planning for social infrastructure should be based on the assumption that urban growth in the 1980s will at least continue at its present rate and possibly accelerate.

6.79 Severe deficiencies in essential infrastructure characterize Indonesia's urban areas. For example only 40% of the urban population has

/1 The 5% figure is based on a comparison of the 1980 and 1971 censuses. However, the definition of urban areas changed during that period and thus the growth is probably an overestimate. The 4.0% figure represents the growth rate of all cities of over 100,000, as they existed in 1971.

/2 In addition the Government's subsidy policies - for energy, rice, housing, interest rates - tend to favor the cities more than the rural areas, and therefore add to the incentive to migrate to urban areas.

/3 Preliminary analysis of the 1980 SUSENAS suggests that per capita income levels grew substantially faster in urban than in rural areas during the 1970s.

access to a safe, reliable public water system. Roughly half the urban population obtain water from private (often polluted) wells, springs or rainwater collection, while others purchase water from vendors at relatively high prices or depend on the heavily polluted rivers and water courses. At present, only four cities have sewerage systems; in each case, the system covers only part of the city and is of limited effectiveness due to age and inadequate capacity. One quarter of the 1971 urban population had no facility for human waste disposal and resorted to the use of surface drains, ditches, canals, or rivers; the percentage has probably not changed. Only 17% of the urban population are served by safe, sanitary latrines and approximately 40% of the urban housing supply consists of nonpermanent structures.

6.80 The Government is giving high priority to the provision of shelter. The Rp 281 billion allocated for housing and water in the 1982-83 budget is about 60% higher in real terms than the 1981-82 allocation. However, given the dimensions of the needs, expenditures are still inadequate. With the urban population growing annually by over 1.5 million, it has been very difficult even to maintain the existing standards of services. As a result, the public health situation is particularly bad. The situation is especially severe in the "kampung" areas, the clustered, densely populated urban neighborhoods - often former villages that have grown together in the process of urbanization - that house a large proportion of the urban population. Most of these areas rely on open drainage channels to carry off rainwater, septic tank overflow and household waste. These channels tend to deteriorate to open sewers and rubbish dumps, becoming blocked in the dry season and flooding the kampungs in the rainy season. Water and filth-borne diseases are still major causes of morbidity and mortality in the country.

Housing

6.81 Housing investment in Indonesia is considerably lower than would generally be considered desirable. Indicative standards suggest that expenditures of the order of 5% of GDP are usually required to keep pace with housing needs in developing countries,^{/1} and this is when starting from a reasonable initial stock. Although there are problems of measurement, it is estimated that only about 3% of GDP is spent on housing investment in Indonesia, and the initial stock is far from satisfactory.^{/2} Over 90% of housing in Indonesia is privately constructed and financed. Although no data are available on private house construction, indirect indications suggest rapid growth; for example, per capita consumption of cement rose by 250% between 1970 and 1980 (see Annex III, Table 8.2). Most of this investment is undertaken personally by the owner/occupant, who generally arranges his own financing outside the formal banking system. This will

^{/1} See e.g. World Bank: Shelter; Poverty and Basic Needs series, September 1980. These figures refer to total investment, not just that undertaken by the Government.

^{/2} The entire construction sector accounts for less than 6% of GDP. Housing probably accounts for about half of this.

probably continue to be the case for a long time to come. However, the role of the public sector in the provision of low cost housing and mortgage financing is rapidly becoming more significant; it will be necessary to expand this role - particularly with regard to financial intermediation in urban areas - if basic needs in housing are to be satisfied by the end of the century.

The Role of the Public Sector

6.82 Of the total investment in housing in Indonesia, currently about 10% is either constructed by or financed through the public sector. Government sponsored institutions include: the National Housing Board, a ministerial level committee which is responsible for defining housing policy; PERUMNAS, the National Urban Development Corporation, which is authorized to build low-cost housing; and Bank Tabungan Negara (BTN) which has been assigned responsibility for mortgage financing. For Repelita II, a target of 70,000 units was established. Of this number, 50% were to be provided in the form of sites and services rather than complete dwellings. The target was successfully achieved.

6.83 Building on the policy and institutional base established during Repelita II, the housing program for Repelita III calls for PERUMNAS to build 120,000 units (50% of which are to be constructed by the occupants on serviced sites) over the five-year period. BTN is required to finance these, as well as an additional 30,000 units to be built by private developers. The PERUMNAS program has expanded from 17 cities under Repelita II to over 80 for Repelita III. The increased logistical requirements temporarily slowed the pace of its program, but PERUMNAS is now again expected to achieve its plan targets. BTN has been slow in developing capacity to fulfill its Repelita III responsibilities, but is now showing encouraging signs of improvements. In 1980, only 18,400 loans were transacted,^{/1} well short of the 30,000 annual target, while in 1981 the plan target was easily exceeded with 42,800 loans transacted. An extensive organizational development program was initiated in September 1981 aimed at developing increased capacity.

6.84 PERUMNAS has the technical capacity to build more units annually than the 24,000 required under the present plan, having already produced 40,000 in the last year of Repelita II. However, a number of administrative problems have been encountered. Estate management and internal operational planning has not always been given priority such that in the first year of Repelita III the majority of completed units were unoccupied despite high demand for, and rationing of, public housing. Since that time PERUMNAS has improved its overall performance and is successfully implementing a plan to reduce the backlog of vacant units to 5% of inventory by mid-1982. A more

^{/1} Of which 12,000 were privately developed units, and 6,200 for PERUMNAS housing. Thus lending for private housing was twice the target level.

intractable constraint is the problem of land acquisition. Land prices in and around the cities are rising extremely fast and it is becoming increasingly difficult to site low cost housing schemes in or near the cities if the land has to be newly acquired for that purpose. In an effort to at least partially overcome this problem, a program of land banking is being introduced so that sites will be available a year or two before they are needed. Another potential difficulty concerns the increased logistical and managerial requirements brought about by expanding PERUMNAS' activities to the smaller cities. While these may be somewhat alleviated by strengthening regional offices, it is doubtful that the organization will be able to efficiently manage many small projects spread throughout the smaller cities and towns. It may be preferable for PERUMNAS to concentrate on large and medium-sized cities, leaving local authorities and nonprofit cooperative organizations /1 to prepare serviced sites for housing, to be financed by BTN. This approach to meeting the housing needs in small communities seems most viable in the Indonesian context.

6.85 The Beneficiaries of Public Housing. The public sector housing program is targeted at families whose income falls between the 20th and 70th percentile of the income distribution. Those in the top 30% are excluded on the grounds that no Government support is needed, while those in the bottom 20% are thought to be unable to contribute a sufficient proportion of the total cost to maintain the viability of the program. Interest rates on BTN mortgages vary according to the type of housing and expected beneficiaries - 5% per annum (20 year maturity) for housing directed towards the bottom 40% of the income distribution, 7% for the top 60%, and 9% for privately constructed units, which are generally of higher quality.

6.86 Data are not available on the income of beneficiaries of publicly supported housing, but it is probable that, with the exception of "squatters" in urban Kampung areas who in some cases are provided public housing to free the space for urban development, very few families in the bottom 40% of the income distribution have access to publicly supported housing. This is not in the first place because of their inability to pay, but because of inadequate supply. A recent study by PERUMNAS found that, at present prices, about eight times its current program could be absorbed. Generally in poor countries, those in the bottom 40% of the income distribution spend about 20% of their incomes on shelter. A recent study of PERUMNAS sites and services housing in Denpasar, Yogyakarta, and Samarinda found that total debt servicing for the poorest 40% in those cities would not exceed 12-16% of their income./2

/1 For example, the Yayasan Kas Pembangunan (the Financial Development Foundation).

/2 World Bank: Fourth Urban Development Project - Staff Appraisal Report, March 1981.

However, because demand for such facilities far exceeds supply, access is rationed and the needs of lower income groups in particular are not being met. Access to public housing is likely to become more equitable if some of the excess demand for these facilities were removed through an expanded program.

Future Options in Housing Policy

6.87 What can reasonably be expected for the future? It is clear that, given existing needs, the present rate of housing investment, both private and public, should be expanded. For example, it is estimated that in urban areas alone on average over 200,000 new housing units must be constructed annually if urban housing needs are to be met by the year 2000.^{/1} This figure greatly exceeds the 30,000 annual financing target for BTN. Of course, most of the expansion must come from the private sector. However, given that BTN is the only mortgage bank for low and middle income housing and that no other long terms funds are available through the formal banking sector, ^{/2} it is clear that the role of the public sector, particularly in financial inter-mediation, must also be expanded considerably if these targets are to be met. Under the existing pattern of financing and construction, the required public sector expansion is likely to impose an unbearable strain on scarce budgetary and administrative resources.

6.88 The Government has recently increased the priority given to low income housing in its budgetary allocations. Public funds allocated through PERUMNAS and BTN amount to Rp 148 billion in the 1982/83 budget, an increase of 55% over 1981/82.^{/3} In addition, over Rp 20 billion is lent

^{/1} An attempt has been made to assess the global financial need for achieving adequate shelter for the entire poverty group in the world by the year 2000; see World Bank: Shelter; Poverty and Basic Needs Series, September 1980. The most interesting conclusion of the exercise was that the financial needs, although high, are not impossible, even for the poorest countries of the world, provided efforts are made to recover costs from beneficiaries.

^{/2} A private mortgage company, P.T. Papan Sejahtera, has recently been incorporated for the purpose of lending for middle and upper income housing.

^{/3} This is in the form of capital participation in PERUMNAS (Rp 50 billion in 1981/82; Rp 78 billion in 1982/83) and in BTN (Rp 45 billion in 1981/82; Rp 70 billion in 1982/83). The 1982/83 allocation accounts for almost 2% of total central government development expenditures. In addition to these funds, a significant proportion of the Rp 243 billion allocated for settlement and transmigration projects in 1982/83 will finance dwellings.

annually to BTN by Bank Indonesia at 4% interest. However, given that overall budgetary resources are likely to rise less rapidly than in recent years and that it is not reasonable to expect the proportion of Government spending allocated to housing to increase much, efforts must be made to increase the effectiveness of existing allocations. In broad terms, there are four possibilities:

- (a) Sites and Services: The proportion of PERUMNAS resources allocated to sites and services as opposed to full construction could be increased. PERUMNAS has already demonstrated its ability to construct a wide range of serviced sites and to recover costs. The average /1 cost for a small plot near the city center, including site preparation, water supply, sanitary and drainage facilities, and "core" housing of two walls and a roof, is about Rp 1.5 million (\$2400). This compares with a cost of about Rp 2.8 million (\$4500) for complete low income dwellings of the same floor area constructed by PERUMNAS. Experience has shown that as long as the tenants of the partially complete sites have access to additional credit (about Rp 350,000) for construction materials, they can almost always undertake the required construction themselves. This approach is particularly well adapted to Indonesian circumstances where labor, simple construction skills, and ingenuity are abundantly available relative to capital.
- (b) The Private Sector: The Government does encourage private construction companies in providing housing, by including lending for this purpose in the Repelita III targets for BTN. But the growth of private investment still remains seriously constrained by inadequate mortgage finance. The potential for the private sector is indicated by the fact that in 1980 and 1981 BTN lending for private house construction was over twice that for PERUMNAS housing; by contrast, the target had been for four times as much lending for PERUMNAS as for private housing. Credit to construction companies should also be expanded. Many small companies find it hard to grow due to their inability to borrow. Investment in capital equipment, however rudimentary, usually requires the company to borrow sums of money that are quite large relative to its equity base. To help companies overcome this problem the Government is actively encouraging the development of leasing companies. Currently, the Government is also

/1 Costs vary according to land prices and site conditions. Costs quoted here are averages for the cities of Yogyakarta, Semarang, Denpasar, Samarinda, Padang and Jambi. See World Bank: Fourth Urban Development Project, Staff Appraisal Report, March 1981.

planning a major effort in strengthening private construction companies through training in technical, managerial and accounting skills, and in the provision of credit through the commercial banking system.

- (c) Cost Recovery: The Government has recently initiated a plan whereby PERUMNAS should become self-financing by 1984. In addition interest rates on BTN mortgages have been raised slightly. However, lending rates remain negative in real terms, on the grounds of affordability to low-income groups. It is probably true that the poorest 10-15% of the population could not afford higher interest rates, but they do not currently have access to PERUMNAS or BTN schemes anyway. Given the public resource outlook, increased cost recovery will be essential if housing finance is to be expanded to the extent required. In addition there are three supplementary reasons for raising cost recovery further. First, relatively easy access to Government funds tends to detract attention from efforts to reduce costs and increase efficiency. According to many observers, for example, the quality of PERUMNAS' low and middle income housing is low relative to its cost. Second, virtually all public sector housing is in and around cities, and high subsidies can add to the incentive to move from rural to urban areas. Third, higher interest rates and consequent increased financial viability of the mortgage bank makes it possible to raise funds commercially rather than rely on Government financing (see (d) below).
- (d) "Off-Budget" Financing of Low-Cost Housing: Currently all BTN financing of PERUMNAS housing comes from the Ministry of Finance as equity through the budget. For non-PERUMNAS housing, 90% of the funds come from the Bank Indonesia loans at 3% interest and 10% from BTN's deposit accounts at about 15% interest. It is difficult for BTN to raise its own funds since regulations on deposit rates essentially limit borrowing to small deposit accounts of less than Rp 200,000./¹ The Government has provided the legal framework for a public enterprise such as BTN to issue bonds (para 3.31). However, at present lending rates it is not financially feasible to offer commercially attractive rates on such bonds unless subsidies from the budget were increased. In addition, until this year, there has been little incentive to borrow in this manner since funding through the budget has been relatively plentiful. Given the administrative time required for the preparation of a

¹ BTN is permitted to pay 15% on deposits up to Rp 100,000 and 6% for sums larger than that.

bond issue, it is desirable that the needs of mortgage financing be considered with more urgency if severe credit rationing is to be avoided. Incidentally, with higher lending rates, the successful experience of BTN in the bond market and the creation of a loan insurance scheme, it is likely that private mortgage banking for low cost housing would become profitable, as has occurred in a number of other developing countries./1

A Feasible Housing Program

6.89 The recommendation above are incorporated in Table 6.13. which illustrates how the nature of public support for the housing sector may have to change if housing needs are to be satisfied. The table presents past achievements and a feasible program for Repelitas III and IV. Given that BTN continues to be the only mortgage bank for low and middle income housing, its role will need to expand considerably in the coming years. It is suggested that BTN financing could rise to an annual rate of 100,000 units during the Repelita IV period, compared to 30,000 in Repelita III. This is equivalent to half of the estimated annual requirement for new urban housing if "adequate" shelter is to be available for the entire urban population by the year 2000. The number of PERUMNAS constructed houses will be required to grow significantly; the target for the 1984-89 period is assumed to be double that for Repelita III. The proportion of sites and services in PERUMNAS construction is assumed to rise from one half to two thirds. However, even with this expansion of PERUMNAS, its importance as a proportion of the total housing financed by BTN is expected to decline - from 80% to 50%. This will require a six-fold increase in BTN financing of privately-constructed units. Associated with this would be the introduction of privately constructed serviced sites.

6.90 Given the importance of other claims on public resources it is assumed that the proportion of the Government's development expenditure allocated to housing does not rise, but stays constant at 2.0%, and that Bank Indonesia lending to BTN expands in line with overall credit expansion (see para 3.38). Table 6.13 suggests that even with cost savings through an increased proportion of serviced sites, the existing financing pattern whereby the bulk of the funds come from the Government at highly subsidized rates will not be able to continue if the overall program is to expand to the extent required. The bottom line of the table shows that the "additional financing requirement" expands very dramatically. This requirement would have to be met through borrowing through the long-term capital market, and through additional cost recovery from housing beneficiaries through higher interest rates.

/1 The provision of long-term finance for private housing should be seen within the context of the need for overall financial reforms discussed in para. 3.34.

Table 6.13: PUBLICLY SUPPORTED HOUSING: ACHIEVEMENTS AND PROJECTIONS
 Thousand Units and Billion Rupiah (1980-81 prices)

	1974/75 to 1978/79 /a (Actual)	1979/80 to 1983/84 /a (Target)(Feasible)	1984/85 to 1988/89 /a (Feasible Projection)
Construction (Thousand Units)			
PERUMNAS	70	120	300
Complete units	(35)	(60)	(100)
Serviced sites	(35)	(60)	(200)
Private Sector/a	-	30	200
Complete units	-	(30)	(100)
Serviced sites	-	-	(100)
<u>Total</u>	<u>70</u>	<u>150</u>	<u>500</u>
<u>Total Cost/b</u> (billion rupiah)		385	1170
<u>BTN Financing/c</u>		365	1110
Government Budget/d		265	475
Bank Indonesia/e		90	260
Savings Deposits/f		10	25
<u>Additional Financing Requirement/g</u>		-	350

/a These correspond to the Repelita II, III and IV periods respectively.

/b Only includes private sector construction financed by BTN. Feasible program for Repelita III based on extrapolated current lending rate for private units.

/c Including loans for construction materials made to occupants of sites and services units. Cost in 1980-81 prices assumed as follows. PERUMNAS complete units, Rp 2.8 million, sites and services (including loans for construction materials) Rp 1.8 million; private sector complete units, Rp 3.5 million, sites and services Rp 1.8 million.

/d 95% of total cost

/e Percentage of development budget assumed to stay constant (see chapter 3)

/f Assumed to expand in line with overall credit expansion (para 3.38)

/g Assumed to expand in line with private sector savings (para 3.34)

/h Consists of other long term borrowing (through the bond market), mortgage repayments; net of BTN operating costs.

Source: PERUMNAS and BTN (historical data) and World Bank Staff projections.

Water Supply and Sanitation

6.91 In the 1970s, urban water supply development was concentrated in the larger cities, mostly those with 100,000 or more inhabitants. Projects were undertaken in 38 such cities. During the decade, production capacity in urban areas rose from 9,000 to over 21,000 liters per second. Water supply programs in rural areas, financed principally under the INPRES (Kesehatan and Desa) programs, brought water to an additional 10 million people in the 1970s. During the same period, however, the rural population rose by 20 million. By 1981, 40% of the urban population and 18% of the rural population had access to safe water (see Table 6.14.).

A Program for the 1980s

6.92 In the early 1980s, it was recognized that the pace of development of services needed to be accelerated, and that in particular the problems of smaller cities and towns, many of which are without public supplies, must be an urgent priority. In mid 1981, targets were set for the decade ahead; these are summarized in Table 6.14./1 These targets are more ambitious than those implied in the Repelita III plan, which calls for the improvement in the level of urban services in 150 small towns, 40 medium sized cities, and 10 large cities./2

6.93 A key element in the implementation of these targets for urban areas is the continuation and expansion of the Kampung Improvement Program (KIP), which provides basic minimum services to as large an area of poorly serviced kampungs in as short a time as possible. These services include footpaths, surface drainage, water supply from public standpipes, individual and communal toilets and washing facilities, local solid waste facilities, secondary roads, elementary schools and community health centers. Although there have been many complaints about poor quality construction, the general consensus is that the program has been extremely successful. Beginning in Jakarta on a small scale during Repelita I, it had been expanded by the third year of Repelita III (1981-82) to fifty five cities. By the end of 1981, all high and medium density kampungs in Jakarta had been improved, and a target

/1 Conference on Drinking Water; Bali, August 1981. Although prepared by the relevant Government Departments, these targets are unofficial.

/2 A small town is defined as one with population of 5,000-50,000; a medium city has between 50,000 and 500,000 inhabitants; and a large city has a population of over 500,000. There are currently only eight "large" cities (Jakarta, Surabaya, Bandung, Medan, Semarang, Palembang, Ujung Pandang and Malang), but two more (Padang and Surakarta) will "graduate" during the Repelita III period.

Table 6.14: ACCESS TO SERVICES: ACTUAL AND TARGET
(Million of Beneficiaries and Percent of Population)

	Safe Water Supply				Sanitation			
	1981 (actual)	1990 (Target)	1981 (actual)	1990 (target)	1981 (actual)	1990 (target)	1981 (actual)	1990 (target)
	Millions	%	Millions	%	Millions	%	Millions	%
Rural	21	18%	82	60%	28	24%	55	40%
Urban	14	40%	36	75%	7	20%	29	60%
<u>Total</u>	35	23%	118	63%	35	23%	84	45%

Source: Rural Water Supply and Sanitation in the 1981-1990 Decade, a paper by the Directorate General of Communicable Disease Control, Ministry of Health.

of twelve years has been established to improve all the kampungs in the ten major cities. This program provides a clear illustration of the Government's policy to give preference to broad coverage of social programs, even at the expense of lower standards, over the more selective approaches found in many developing countries, which tend to benefit a narrow elite only. The Repelita III program was originally proposed to cover 200 cities, but has since expanded to 800. Another important element in achieving the expanded targets is a small towns water supply program, the objective of which is to supply piped water to about 1,700 towns over a five to six year period.^{/1} This is in addition to the Repelita III urban water supply program, which includes projects in 50 cities and 140 towns.

6.94 The needs in rural areas are immense. If targets are to be met, an additional 60 million people in over 30,000 villages will be supplied with clean water by 1990. If such a program is to be successfully implemented, it will be necessary to delegate authority to the lowest possible level. One urgent need is for the training of small local construction firms in the technology of village water systems. In many instances, it may be possible for the Government to simply provide the required capital equipment at subsidized prices to the construction companies, who are then responsible for liaising with village leaders concerning its installation. Local labor could be provided on a voluntary basis, as is currently the case under the INPRES Desa scheme. Village representatives could be invited to inspect existing facilities in nearby villages to decide whether they would want to participate in the system. Experience from other countries suggests that if the schemes

^{/1} This is known as the IKK (ibukota Kecamatan) program.

are sufficiently simple and the costs consequently low, there will be no difficulty in finding sufficient effective demand for the scheme, with the village bearing the bulk of the entire cost, after the subsidization of the equipment. This approach might be appropriate in those parts of the country where there are many closely linked settlements with similar needs.

6.95 The Government has recognized that a dramatically expanded program will require simple, replicable technical standards. The needs of the smaller cities and rural areas are different and often technically simpler than those of the major cities. KIP standards are being simplified; for the larger cities, a cost of Rp 7 million per hectare is budgetted while for the smaller towns, only Rp 3 million.^{/1} In addition, urban water supply systems which have been criticized for being "over-engineered", are gradually being simplified. For the expansion of the programs to the smaller towns, Cipta Karya has produced manuals which simplify standards and delegate the selection of the design of the distribution network to the provincial level. Experiments are also being undertaken in rural areas with the aim of simplifying technical standards.^{/2}

Financing the Program

6.96 What are the costs of this ambitious program? Investment costs for water supply and sanitation vary greatly according to population density, proximity to source, topography and degree of contamination. For example, in a crowded urban environment, with no existing facilities, and far from a source of clean water, investment costs for water, even when only standpipes are provided, may be above \$50 per person, while in a rural community, when all that may be required is a handpump, the cost may be as little as \$5 per person. The average per capita investment cost for urban water supply, including the small towns program and the water component of KIP can be expected to be about

^{/1} This is partly due to lower densities in small city kampungs (100-150 per ha compared to 200-500 per ha in the larger cities and 700-800 in DKI Jakarta), but also because in smaller cities the pollution and contamination brought about by crowded conditions is generally not as great.

^{/2} In the northern coastal plains of West Java for example, where ground and surface water is generally too contaminated for safe consumption, slow sand filtration systems are being introduced on a trial basis. Properly operated, this system can remove 99% of all pathogenic bacteria in the water and is particularly effective when combined with rice husk or coconut fibre filters. The capital cost for communal standpipes is between \$5-10 per capita, if labor is provided on a voluntary basis, and operating costs amount to about \$1 per capita per year.

\$45 (in 1981 prices),^{/1} while in rural areas a per capita cost of \$20 should be sufficient. Average costs for sanitation are also likely to be higher in urban (\$15 per capita) than in rural areas (\$10). These units costs have been employed to project the total investment costs of the program, summarized in Table 6.15. In 1981/82 the Government spent about Rp 65 billion ^{/2} on investments for water supply and sanitation, accounting for about 1.0% of the development budget. In addition to that, Rp 7 billion or so is provided by local government budgets, borrowing by the water authorities, and local contributions to capital costs. The average annual program implied by the target for the 1980s therefore represents a real increase of over 250%. Although ambitious, this target could be achieved. It would require the continuation of the present growth in budget allocations (40% p.a. real increase in 1975-1981) until 1985/86 and thereafter a modest 5% p.a. real increase for the rest of the decade. In the light of what can be expected for the overall growth in the Government's development budget (see Chapter 3), it is evident that if these targets are to be met then both the proportion of Central Government development funds allocated to these programs and the contribution from local governments and from the beneficiaries, must be substantially raised.

6.97 Operational and maintenance (O&M) costs will also rise dramatically, as shown in Table 6.15. As is the case in most countries, in the emphasis of maintaining the momentum of new investment, financial provisions made for recurrent costs have tended to be neglected. Therefore, increased recurrent funds are not only required for new investments but also for existing facilities. Inadequate emphasis on O&M has been a problem in the KIP and for the small towns water supply program (IKK). For the latter program, initial construction is undertaken by the Ministry of Public Works (Cipta Karya), which after two years transfer responsibility for the system to local water authorities (PDAMS),^{/3} under the supervision of the Department of Home Affairs. Because no capacity now exists either in Home Affairs or within the provinces to supervise the operation and maintenance of the system, it tends to be given low priority, and sometimes funds allocated for the purpose are diverted for general Kabupaten use.

^{/1} This is an average of \$37 for small towns and \$60 for cities. It is lower than the average of about \$80 per capita cost (1981 prices) for the Cipta Karya urban water program over the last few years.

^{/2} This includes the Cipta Karya programs (urban water and sanitation program and KIP) and INPRES funds supervised by the Ministry of Health.

^{/3} Perusahaan Daerah Air Minum.

6.98 Cost Recovery. The capital and recurrent costs in Table 6.15, need not, of course, all be met by the Government. The systems can be at least partially self-financing. Beneficiaries are willing and able to pay about 3-5% of their incomes for water and sanitation - a figure which appears to be remarkably constant throughout the developing world. Given the current levels of income in urban and rural areas of Indonesia and the technical standards of the proposed systems, this percentage will, on average, be sufficient to cover all operating costs and part of the investment cost. Some of the services may appropriately be subsidized on social grounds and because these services have benefits, in the form of a cleaner, healthier environment, that accrue to the entire population and not just those who are directly consuming the services. Where consumers only have access to water through public standpipes, for example, it is difficult, and not necessarily desirable to recover full costs. A "basic needs" requirement of, say, 30 liters per day may reasonably be provided at a low or zero charge. This subsidy can be financed by higher charges to those people benefiting from metered house connections and consuming more than this minimum requirement. In the past this cross-subsidization has been attempted by levying high connection charges that sometimes exceeded costs significantly. This has tended to discourage house connections, which are one of the most important means for recovering costs for the entire system. If cross-subsidies are to be effectively used to finance communal water facilities, it would be preferable if connection charges were set equal to costs with the beneficiaries permitted to pay in monthly installments over a period of, say, five years; and the use of water beyond a minimum of 10 cu. meters per month charged at a progressively higher tariff, to enhance revenues, allow for cross-subsidies, and discourage waste.

6.99 Currently funds for recurrent expenditures on water facilities are provided as grants to the Water Authorities (PDAMS), according to a formula (60% grant for 60% of the beneficiaries). There are good reasons for providing low or zero interest rate loans instead of grants. This would not only help recover costs, but would also encourage greater financial accountability. Associated with this is a need to strengthen the management of the PDAMS by providing management training or by changing the composition of the boards to include members with commercial experience.

6.100 The costs of the expanded KIP and sanitation programs could be recovered through increased property taxation (IPEDA) which currently is rather low by international standards. About 6% of local revenues are derived from property taxes, whereas 20% could be considered a reasonable target for Indonesia. Although receipts have been increasing at an annual rate of about 15% in nominal terms since 1976/77, the proportional importance of IPEDA has not changed significantly, although the Government is now indicating that it will receive a higher priority. If the current revenue (Rp 109 billion in the 1982/83 budget) were raised in real terms by 15% per year until the level of 20% of local government revenue was achieved at about the end of the decade, increased IPEDA revenues would be more than adequate to support loan

financing for the expenditures envisaged. An additional financing mechanism which may be designed to encourage local technical capability and financial authority is an urban development fund. This would provide funds through loans and grants for local program requirements, beginning on a small scale with a limited range of items. The fund would be controlled at a national level by a policy board representing the ministries and agencies authorizing and supervising programs to be financed by the fund, while day to day administration could, for example, be delegated to provincial branches of Bank Indonesia. This approach has been tried in a number of developing countries, usually with good results.

Table 6.15: COSTS OF MEETING 1990 WATER SUPPLY AND SANITATION TARGETS /a
(constant 1980/81 prices)

	Additional Population to be served (million)	Average Growth rate over the period (%)	Investment Cost			Additional Operation & Maintenance Costs		
			Cost per capita (Rp '000s)	Total Cost (Rp billion)	Average Annual Cost /b (Rp billion)	Per capita per year (Rp '000)	Total per year (Rp billion) 1981 1980	
<u>Water</u>								
Rural	61	18	15	915	102	.375	7.9	30.8
Urban	22	13	30	660	73	.625	8.8	22.5
Subtotal	<u>83</u>	<u>16</u>	<u>45</u>	<u>1,575</u>	<u>175</u>		16.7	53.3
<u>Sanitation</u>								
Rural	27	9	6	162	18	.063	1.8	3.5
Urban	22	15	20	440	49	.250	1.8	7.3
Subtotal	<u>49</u>	<u>12</u>	<u>26</u>	<u>602</u>	<u>67</u>		<u>3.6</u>	<u>10.8</u>
<u>Total</u>	<u>132</u>			<u>2,177</u>	<u>242</u>		<u>20.3</u>	<u>64.1</u>
Rural	88			1,077	120		9.7	34.3
Urban	44			1,100	122		10.6	29.8

/a These represent total costs for providing services, not just those borne by the Government.

/b Total cost divided by nine.

Source: Bank staff estimates.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

ANNEX 1: Analysis and Projections

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INDONESIA
COUNTRY ECONOMIC MEMORANDUMExports: High Case
(US\$ million)

	Actual										Revised									
	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91		
A. Current Prices																				
1. Timber	720	615	527	885	943	1,130	2,125	1,583	909	1,274	1,825	2,283	2,684	3,492	4,221					
2. Rubber	483	423	381	577	608	774	1,101	1,077	862	1,059	1,278	1,471	1,723	2,184	2,753					
3. Palm oil	89	182	142	167	202	221	257	321	387	469	517	560	620	684	1,104					
4. Coffee	31	50	40	64	62	98	91	97	88	96	107	120	127	102	153					
5. Tobacco	46	36	25	55	58	66	46	61	35	64	76	87	102	131	153					
7. Pepper	31	22	25	40	42	66	46	61	35	43	52	65	65	81	114					
8. Other agriculture	174	199	195	248	278	364	467	612	338	436	549	697	882	1,114	1,298					
9. Subtotal agriculture (1-8)	1,653	1,623	1,472	2,347	2,698	3,199	4,862	4,055	2,745	3,738	4,632	5,580	6,575	8,783	10,748					
10. Tin	98	166	158	181	253	324	388	454	468	425	463	509	568	633	863					
11. Copper	56	102	74	95	74	64	98	115	95	97	113	137	162	206	283					
12. Aluminum	21	28	25	44	36	35	126	203	17	134	283	454	516	616	703					
13. Nickel	175	296	257	320	363	437	609	772	786	1,028	1,278	1,562	1,761	2,047	2,195					
14. Subtotal minerals (10-13)	47	114	144	196	245	360	700	757	744	965	1,239	1,822	2,479	3,004	3,082					
15. Manufactures	1,905	2,033	1,873	2,863	3,507	3,979	6,121	5,884	4,285	5,462	7,239	8,954	10,815	17,172	23,836					
16. Total nonoil exports (9+14+15)	1,105	4,548	5,410	6,330	7,192	6,838	9,978	14,644	15,418	14,245	20,021	20,585	20,135	23,851	25,320					
17. Oil (gross)	-	-	-	-	-	516	1,345	2,017	2,175	2,175	2,848	3,694	5,840	8,335	11,799					
18. LNG (gross)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
19. Subtotal oil and LNG (17+18)	1,105	4,548	5,410	6,330	7,354	7,374	11,323	16,661	17,593	16,420	22,869	24,279	25,975	32,186	37,119					
20. Total exports (16+19)	3,010	6,581	7,283	9,213	10,861	11,353	17,494	22,245	21,878	21,882	30,108	33,243	36,790	49,358	60,933					
3. Price Indices (1979/80 = 100)																				
1. Timber	34	36	34	41	44	51	100	105	100	117	127	139	152	186	211					
2. Rubber	47	45	40	57	62	75	100	104	87	99	113	130	149	183	210					
3. Palm oil	51	101	57	59	77	90	100	81	79	92	102	113	126	147	162					
4. Coffee	30	31	27	81	124	78	100	84	62	82	85	87	90	113	130					
5. Tea	41	74	63	77	152	111	100	96	94	99	109	120	133	157	176					
6. Tobacco	65	68	87	95	107	104	100	89	94	104	120	138	159	193	219					
7. Pepper	65	85	80	89	107	92	100	83	72	87	106	130	158	183	201					
8. Other agriculture	58	81	65	77	100	90	100	98	90	100	116	135	158	183	201					
9. Subtotal agriculture (1-8)	41	46	41	54	66	67	100	98	88	102	113	127	141	170	192					
10. Tin	31	49	50	47	71	88	100	105	110	100	109	119	130	158	179					
11. Copper	102	104	89	94	91	80	100	128	100	102	121	144	170	217	256					
12. Aluminum	37	46	37	79	76	76	100	116	116	137	149	162	175	214	244					
13. Nickel	41	59	58	99	73	87	100	111	113	114	129	144	159	197	224					
14. Subtotal minerals (10-13)	48	60	69	71	76	88	100	112	122	124	134	144	154	184	206					
15. Manufactures	41	48	44	56	68	71	100	102	96	107	119	133	147	178	202					
16. Total nonoil exports (9+14+15)	16	40	53	57	60	60	100	146	138	158	170	186	201	261	310					
17. Oil (gross)	-	-	-	-	-	60	100	146	138	158	170	186	201	261	310					
18. LNG (gross)	18	44	48	63	60	60	100	146	138	158	170	186	201	261	310					
19. Subtotal oil and LNG (17+18)	18	44	48	63	60	60	100	146	138	158	170	186	201	261	310					
20. Total exports (16+19)	29	43	59	56	63	65	100	132	140	142	154	168	181	225	256					
C. Constant Prices (1979/80 = 100)																				
1. Timber	2,118	1,708	1,550	2,159	2,143	2,216	2,216	1,508	909	1,084	1,433	1,637	1,762	1,876	2,001					
2. Rubber	1,028	864	933	1,012	981	1,032	1,101	1,036	868	1,070	1,267	1,463	1,623	1,783	1,986					
3. Palm oil	173	182	247	249	292	280	280	260	267	283	283	283	283	283	283					
4. Coffee	263	297	415	407	506	631	732	760	637	572	608	600	600	600	600					
5. Tea	76	68	42	83	53	88	91	108	95	97	98	100	102	109	114					
6. Tobacco	48	52	31	62	58	72	46	78	63	68	68	68	68	68	68					
7. Pepper	48	52	31	62	58	72	46	78	63	68	68	68	68	68	68					
8. Other agriculture	300	266	300	322	278	382	467	420	375	434	473	516	558	609	646					
9. Subtotal agriculture (1-8)	4,079	3,534	3,623	4,337	4,561	4,743	4,862	4,129	3,192	3,662	4,084	4,408	4,664	5,157	5,584					
10. Tin	316	339	316	385	356	368	388	432	425	425	425	425	425	425	425					
11. Copper	57	61	44	56	47	44	126	174	95	90	95	95	95	95	95					
12. Aluminum	428	498	443	542	484	502	609	696	704	898	990	1,083	1,107	1,323	1,341					
14. Subtotal minerals (10-13)	160	190	209	276	322	409	700	676	610	778	992	1,265	1,610	3,145	4,894					
15. Manufactures	4,667	4,212	4,275	5,155	5,167	5,637	6,171	5,481	4,506	5,185	6,066	6,756	7,381	9,125	11,819					
16. Total nonoil exports (9+14+15)	6,906	11,370	10,208	11,140	11,987	11,430	9,978	10,030	9,758	9,016	11,777	11,067	10,017	9,138	8,168					
17. Oil (gross)	-	-	-	-	-	860	1,345	1,382	1,382	1,382	1,765	1,986	2,905	3,193	3,806					
18. LNG (gross)	6,906	11,370	10,208	11,140	12,257	12,290	11,423	11,412	11,140	10,397	13,542	13,053	12,923	12,331	11,974					
19. Subtotal oil and LNG (17+18)	11,573	15,582	14,483	16,295	17,414	17,927	17,494	16,893	15,646	15,583	19,608	19,809	20,304	21,956	23,793					

Source: World Bank staff estimates.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Imports: High Case
(US\$ million)

	Actual								Estimate 1981/82	Projected								
	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81		1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91
A. Current Prices																		
1. Rice	389	493	275	333	650	341	727	392	193	225	505	588	677	745	822	905	998	1,088
2. Other consumption goods	610	457	631	1,024	1,326	1,572	1,614	2,499	2,703	2,759	3,070	3,547	3,799	4,637	5,290	6,050	6,891	7,828
3. Intermediate goods	1,163	2,162	1,771	1,603	1,721	2,085	2,701	3,564	4,463	4,753	5,420	6,261	7,096	7,963	2,958	10,100	11,343	12,704
4. Capital goods	76	1,229	2,413	3,207	3,544	3,545	3,986	5,335	7,150	8,652	11,004	13,359	14,827	16,382	18,151	20,395	22,372	25,037
5. Total nonoil imports	2,938	4,341	5,090	6,167	7,241	7,543	9,028	11,790	14,509	16,389	19,999	23,755	26,399	29,727	33,221	37,450	41,604	46,657
6. Oil sector /a	460	1,910	2,272	2,640	2,909	2,264	4,348	5,884	7,658	8,318	10,585	9,972	10,006	11,535	12,985	13,730	15,146	16,051
7. Nonfactor services (net)	194	263	345	490	536	586	659	975	1,035	1,100	1,300	1,526	1,782	2,002	2,256	2,533	2,835	3,195
8. Imports and NFS	3,592	6,514	7,707	9,297	10,686	11,493	14,035	18,649	23,202	25,807	31,886	35,253	38,187	43,264	48,462	53,713	59,585	65,903
B. Price Index																		
1. Rice	107	165	110	77	82	111	100	133	148	151	170	192	215	230	246	263	281	298
2. Other goods	48	60	69	71	76	88	100	113	115	124	134	144	154	163	173	184	195	206
5. Total nonoil imports	52	65	70	71	77	89	100	114	115	124	135	145	155	164	174	185	196	208
6. Oil sector /a	40	55	65	67	72	81	100	127	136	136	145	156	167	181	196	212	229	248
7. Nonfactor services (net)	48	60	69	71	76	88	100	110	114	121	130	140	150	159	169	179	189	201
8. Imports and NFS	50	61	68	70	75	86	100	118	121	128	138	148	159	168	179	191	203	216
C. Constant 1979 Prices																		
1. Rice	364	299	250	432	793	307	727	295	130	149	297	306	315	324	334	344	355	365
2. Other consumption goods	1,271	762	914	1,442	1,745	1,786	1,614	2,159	2,338	2,212	2,291	2,463	2,467	2,845	3,058	3,288	3,534	3,800
3. Intermediate goods	2,423	3,603	2,567	2,258	2,264	2,369	2,701	3,153	3,881	3,833	4,045	4,348	4,608	4,885	5,178	5,489	5,817	6,167
4. Capital goods	1,617	2,048	3,497	4,517	4,663	4,028	3,986	4,721	6,217	6,977	8,212	9,277	9,628	10,050	10,492	11,084	11,473	12,154
5. Total nonoil imports	5,675	6,712	7,228	8,649	9,465	8,490	9,028	10,328	12,566	13,171	14,845	16,394	17,018	18,104	19,062	20,205	21,179	22,466
6. Oil sector /a	1,150	3,456	3,492	3,940	4,040	4,153	4,348	4,633	5,630	6,116	7,300	6,392	5,992	6,373	6,625	6,476	6,614	6,472
7. Nonfactor services (net)	404	438	500	690	705	666	659	886	940	917	1,000	1,090	1,188	1,259	1,335	1,415	1,500	1,590
8. Imports and NFS	7,229	10,606	11,270	13,259	14,210	13,309	14,035	15,847	19,136	20,204	23,145	23,876	24,007	25,736	27,022	28,096	29,293	30,548

/a Including services (see Table 4 of this Appendix for disaggregation).

Source: World Bank staff estimates.

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COUNTRY ECONOMIC MEMORANDUM

Balance of Payments: High Case
(US\$ million)

	Actual								Estimate 1981/82	Projected					
	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81		1982/83	1983/84	1984/85	1985/86	1988/89	1990/91
Summary of Balance of Payments															
1. Exports	3,010	6,581	7,283	9,213	10,861	11,353	17,494	22,245	21,878	21,882	30,108	33,243	36,790	49,358	60,953
(a) Oil & LNG (gross)	1,105	4,548	5,410	6,350	7,354	7,374	11,323	16,661	17,593	16,420	22,869	24,279	25,975	32,186	37,119
(b) Nonoil	1,905	2,033	1,873	2,863	3,507	3,979	6,171	5,584	4,285	5,462	7,239	8,964	10,815	17,172	23,834
2. Imports (including net NFS)	-3,592	-6,514	-7,707	-9,297	-10,686	-11,493	-14,035	-18,649	-23,202	25,807	-31,886	-35,253	-38,187	-53,713	-65,903
(a) Oil sector /a	-460	-1,910	-2,272	-2,640	-2,909	-3,364	-4,348	-5,884	-7,658	-8,318	-10,585	-9,972	-10,006	-13,730	-16,051
(b) Nonoil imports	-2,938	-4,341	-5,090	-6,167	-7,241	-7,543	-9,028	-11,790	-14,509	-16,389	-19,999	-23,755	-26,399	-37,455	-46,657
(c) NFS (net)	-194	-263	-345	-490	-536	-586	-659	-975	-1,035	-1,100	-1,300	-1,526	-1,782	-2,533	-3,195
3. Resource balance	-582	67	-424	-84	175	-140	3,459	3,596	-1,324	-3,895	-1,778	-2,010	-1,397	-4,355	-4,950
4. Factor services	-170	-205	-430	-718	-865	-1,015	-1,261	-1,205	-1,203	-602	-1,034	-1,253	-1,650	-2,866	-3,899
(a) Interest public debt /b	-62	-80	-165	-318	-441	-485	-772	-807	-944	-1,096	-1,307	-1,534	-1,801	-2,649	-3,359
(b) Other (net)	-108	-125	-265	-400	-424	-530	-489	-398	-259	494	273	281	151	-217	-548
5. Capital grants	50	15	15	61	66	46	52	76	67	100	100	100	100	100	100
6. Balance on current account	-702	-63	-779	-741	-624	-1,109	2,198	2,467	-2,460	-4,397	-2,712	-3,163	-2,947	-7,121	-8,749
7. Direct foreign investment	331	538	454	287	285	271	217	140	178	200	350	450	600	800	1,000
8. Public M & LT loans /b															
(a) Disbursement	909	1,120	2,152	2,332	1,956	1,638	1,939	2,864	3,897	3,969	4,536	5,182	5,772	8,273	11,113
(b) Amortization	-149	-212	-352	-437	-825	-977	-1,335	-987	-1,189	-1,361	-1,567	-1,872	-2,225	-3,608	-4,924
(c) Net disbursements	760	908	1,800	1,895	1,131	660	604	1,877	2,708	2,600	2,969	3,310	3,547	4,665	6,189
9. Other capital (net)	-25	-1,392	-1,839	-442	-140	888	-1,329	-1,748	-1,266	500	800	800	700	1,800	2,000
10. Change in reserves (- increase)	-364	9	364	-1,001	-651	-708	-1,690	-2,736	840	1,097	-1,407	-1,397	-1,900	-144	-440
11. Net official reserves	929	920	556	1,557	2,208	2,916	4,606	7,342	6,502	5,405	6,812	8,209	10,109	12,504	13,189
Reserves in months of nonoil imports + NFS	3.5	2.4	1.2	2.8	3.4	4.3	5.6	6.9	5.0	3.7	3.8	3.9	4.3	3.8	3.2
Public debt services as % of exports /c	8.3	6.3	10.3	11.7	15.9	18.4	16.0	11.0	15.0	18.1	14.7	14.7	15.0	17.5	18.5
Memorandum Item															
Net foreign assets of the banking system /d							6,906	10,787	10,798	9,101	9,908	11,305	13,205	16,600	17,285
Total reserves in months of nonoil imports + NFS							8.6	10.1	8.3	6.2	5.6	5.3	5.6	5.0	4.4
Current account deficit as % of GDP									3.0	4.4	2.3	2.2	1.8	2.7	2.5

/a Includes services (see Table 4 of this Appendix).

/b Based on IBRD external debt data.

/c Oil exports on net basis.

/d Includes foreign assets of deposit money banks in addition to official reserves.

Source: World Bank staff estimates.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Oil Sector Projection
(million barrels and million dollars)

	Actual		Projected									
	1979/80		1980/81		1981/82		1982/83		1983/84		1984/85	
	bbl	\$	bbl	\$	bbl	\$	bbl	\$	bbl	\$	bbl	\$
1. Crude production	576.2		576		565		529		650		680	
2. Refining inputs	206.4		206		206		206		206		280	
(a) Crude domestic /a	181.1		181		181		181		181		255	
(b) Crude imports	25.3	569.1	25	822	25	887	25	887	25	958	25	1,044
3. Domestic consumption	130.6		144		164		180		197		215	
(a) Domestic refineries	114.9		118		115		115		115		165	
(b) Imports	15.7	494.5	26	1,201	49	2,430	65	3,224	82	4,412	50	2,920
4. Gross exports	441.9	9,978.5	443	14,644	432	15,418	399	14,245	520	20,021	484	20,585
(a) Crude	390.5	8,766.4	399	13,127	381	13,525	348	12,354	469	17,962	425	17,755
(b) Products /b	51.4	1,212.1	44	1,517	51	1,893	51	1,893	51	2,058	59	2,830
5. Gross imports (= 2(b) + 3(b))	41.0	1,063.6	51	2,023	74	3,317	89	4,111	105	5,370	72	3,964
6. Cost of production and services - foreign exchange component		2,607.1		3,076		3,519		3,325		4,396		4,987
(a) Cost of production		765.2										
(b) Service payments		1,841.9										
7. Net oil (= 4 - 5 - 6) current account		6,308		9,345		8,582		6,809		10,255		11,634
Weighted average price per barrel												
(a) Crude		22.5		32.9		35.5		35.5		38.3		41.8
(b) Products - exports /c		23.6		34.5		37.1		37.1		40.4		48.0
(c) Products - imports		31.5		46.2		49.6		49.6		53.8		58.4

	Projected											
	1985/86		1986/87		1987/88		1988/89		1989/90		1990/91	
	bbl	\$	bbl	\$	bbl	\$	bbl	\$	bbl	\$	bbl	\$
1. Crude production	688		696		705		713		721		730	
2. Refining inputs	365		369		374		378		381		410	
(a) Crude domestic	340		344		354		363		366		395	
(b) Crude imports	25	1,134	25	1,235	20	1,076	15	881	15	960	15	1,047
3. Domestic consumption	236		248		273		291		317		347	
(a) Domestic refineries	208		223		279		290		305		328	
(b) Imports	28	1,781	25	2,148	35	2,639	30	2,466	41	3,670	39	3,806
4. Gross exports	434	20,135	395	22,163	400	22,451	362	23,851	368	24,233	355	25,320
(a) Crude	348	15,774	352	17,383	351	18,876	350	20,553	340	21,754	335	23,388
(b) Products /b	84	4,361	72	4,780	49	3,575	41	3,297	28	2,479	20	1,932
5. Gross imports (2(b) + 3(b))	48	2,915	50	3,383	49	3,715	41	3,347	48	4,630	47	4,853
6. Cost of production and services - foreign exchange		5,530		6,143		6,818		7,588		7,260		7,406
(a) Cost of production												
(b) Service payments												
7. Net oil (= 4 - 5 - 6) current account		11,690		12,637		11,918		12,916		12,343		13,061
Weighted average price per barrel												
(a) Crude		45.3		49.4		53.8		58.7		64.0		69.8
(b) Products - exports		51.9		66.4		72.9		80.4		88.5		96.6
(c) Products - imports		63.6		69.3		75.4		82.2		89.5		97.6

/a Including 150,000 bbl/day crude inputs to Singapore refineries under processing agreement.

/b Projections assume domestic output of products equals 80% refinery inputs.

/c Currently product exports mainly consist of LSWR, but after opening of Dumai and Balikpapan hydrocrackers the proportion of LSWR will fall and other products, e.g., Naptha will become more significant.

Source: World Bank staff estimates.

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COUNTRY ECONOMIC MEMORANDUM

Petroleum Fuel Products Projected Domestic Supply and Demand
(thousand barrels per day)

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1988/89	1990/91
<u>Refining Capacity /a</u>									
Existing (nine refineries)	250	250	250	250	250	250	250	250	250
New refineries									
Balikpapan					90	180	180	180	180
Cilacap					90	180	180	180	180
Dumai						30	60	60	60
Subtotal					<u>180</u>	<u>390</u>	<u>420</u>	<u>420</u>	<u>420</u>
<u>Total domestic</u>	<u>250</u>	<u>250</u>	<u>250</u>	<u>250</u>	<u>430</u>	<u>640</u>	<u>670</u>	<u>670</u>	<u>670</u>
of which kerosene	92	92	92	92	164	248	260	260	260
<u>Domestic Demand - High Case</u>									
All products /b	394	422	460	501	548	597	649	770	931
of which kerosene /c							166	178	204
<u>Deficit (Surplus) - High Case</u>									
All products /b	144	172	210	251	218	(43)	(21)	100	261
Kerosene	47	51	55	59	(9)	(88)	(94)	(82)	(56)

/a Capacity to produce the eight BBM products: aviation fuel and oil, gasoline (super and premium), kerosene, automotive and industrial diesel, and fuel oil. Exclusive of the proposed but indefinite Sorong/Jakarta/Batam island refinery that would come on stream in the late 1980s or early 1990s.

/b Calculated using income elasticity of 1.7 (falling to 1.5 in the High Case after 1985) and a price elasticity of -0.3.

/c Income elasticity of 1.0 and price elasticity of -0.4.

Source: World Bank staff estimates.

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COUNTRY ECONOMIC MEMORANDUM

LNG Projection

	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1988/89	1990/91
Exports (f.o.b.)											
Volume (MMT)	1.4	4.1	7.3	7.5	7.5	7.5	9.1	10.8	15.7	17.4	20.7
Existing plants	1.4	4.1	7.3	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Expansion /a											
Bontang							0.8	1.7	3.3	3.3	3.3
Arun							0.8	1.6	3.3	3.3	3.3
Arun II									1.6	3.3	3.3
Other											3.3
Price (\$/MMT) /b	116	126	184	269	290	290	313	342	372	479	570
Gross export value (\$ mln)	162	516	1,345	2,017	2,175	2,175	2,848	3,694	5,840	8,335	11,799
Cost of recovery and services /c (foreign exchange component)	69	291	678	785	822	822	1,034	1,312	2,070	2,795	3,792
Net foreign exchange earnings	92	225	667	1,232	1,353	1,353	1,814	2,382	3,770	5,540	8,007

/a This assumes a delay of about one year on the present construction schedule. The Bontang and Arun expansion are for the Japanese market. The Arun II expansion is under negotiation for the US market. One other expansion (2 trains) is assumed to come on stream at the end of the 1980s.

/b 100% linked to the price of oil.

/c Based on the assumption that the unit cost of recovery rises at the international rate of inflation and that the "contractors' share" per unit rises at 3% above the international inflation rate.

Source: World Bank staff estimates.

INDONESIACOUNTRY ECONOMIC MEMORANDUMTerms of Trade Index
(1979 = 100)

	Nonoil exports: /a Nonoil imports (including NFS)	Total exports: /b Total imports (including NFS)
1973/74	80	58
1974/75	75	70
1975/76	63	72
1976/77	79	80
1977/78	89	84
1978/79	89	76
1979/80	100	100
1980/81	90	112
1981/82	83	116
1982/83	87	111
1983/84	89	112
1984/85	92	114
1985/86	95	114
1990/91	99	119

/a Based on price indices of nonoil exports (Table 1) and nonoil imports, (including net NFS (Table 2)).

/b Based on price indices of total exports (Table 1) and imports, including net NFS (Table 2).

Source: World Bank staff estimates.

INDONESIACOUNTRY ECONOMIC MEMORANDUMBalance of Payment: Comparison of Low and High Policy Cases
(US\$ billion)

	1985/86		1990/91	
	High	Low	High	Low
Current Account	-3.0	-4.0	-8.8	-13.8
As % of GDP	1.8	2.9	2.5	6.4
Change in Reserves (- = increase)	-1.9	-1.1	-0.4	4.7
Reserve Level (in months of imports)				
Official reserves	4.3	3.8	3.2	1.7
Total reserves	5.6	5.1	4.4	1.9
Debt Service Ratio (%)	15.0	16.2	18.5	25.5

Note: The capital account is assumed to be the same under both cases, with the exception that under the Low case it is necessary to repatriate foreign reserves of the commercial banks quite rapidly during the second half of the decade to help bolster official reserves. Also, under the Low case net direct foreign investment is projected to remain constant at \$200 million (in 1980/81 prices) throughout the decade. Under the High case the debt service ratio remains within comfortable bounds throughout the decade, permitting flexibility in borrowing, should the need arise. Under the Low case it is unlikely that Indonesia would continue to enjoy such favourable access to private capital markets; the debt service ratio rises continually throughout the second half of the decade, reaching 25% by 1990.

Source: World Bank staff estimates; based on Tables 4.5 and 4.7.

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Oil Prices Under Different Scenarios

	<u>Actual</u>		<u>Estimate</u>	<u>Projected</u>				
	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1990/91
<u>Oil prices: base case</u>								
Nominal	22.5	32.9	35.5	35.5	38.3	41.8	45.3	69.8
Real (in 1980 \$)	25.1	32.9	37.2	34.5	34.5	35.0	35.5	40.8
Real growth rate (% p.a.)		31.1	13.1	-7.3	0.0	1.5	1.5	3.0
<u>Oil prices: low case</u>								
Nominal	22.5	32.9	35.5	30.5	33.0	36.0	39.0	57.3
Real (in 1980 \$)	25.1	32.9	37.2	29.7	29.7	29.7	29.7	29.7
Real growth rate (% p.a.)		31.1	13.1	0.0	0.0	0.0	0.0	0.0
<u>Memo:</u>								
International price index (1980/1=100)	89.5	100.0	95.4	102.8	111.1	119.4	127.8	171.0

Source: World Bank staff estimates.

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Public Investment Program
(Rp billion)

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1990/91
----- (1980/81 prices) -----							
<u>Direct Government Investment</u>							
Agriculture	320	370	410	470	540	610	1,170
(Irrigation)	(250)	(290)	(330)	(380)	(440)	(500)	(1,010)
(Support services)	(70)	(80)	(80)	(90)	(100)	(110)	(160)
Transportation & tourism	570	610	720	830	950	1,100	1,540
Manpower & transmigration	240	330	400	460	530	610	860
Regional development	390	460	480	530	580	640	900
Education	460	600	850	950	1,070	1,200	1,680
Health	160	200	210	240	260	300	420
Urban & water supply	50	60	90	140	240	270	340
General public services	480	560	570	600	630	660	840
Others	280	340	370	410	460	520	660
<u>Total</u>	<u>3,000</u>	<u>3,520</u>	<u>4,100</u>	<u>4,630</u>	<u>5,260</u>	<u>5,910</u>	<u>8,410</u>
Annual increase (%)		17.3	16.5	12.9	13.6	12.4	7.3
<u>Public Enterprise Investment</u>							
Agricultural estates	100	450	610	690	660	710	910
Industry & mining	350	660	1,440	1,600	1,270	1,300	1,300
Electric power	420	500	1,330	1,000	820	850	1,400
Housing	50	70	110	140	160	200	420
Other /a	550	200	220	250	280	310	460
<u>Total</u>	<u>1,400</u>	<u>1,880</u>	<u>3,710</u>	<u>3,680</u>	<u>3,190</u>	<u>3,370</u>	<u>4,490</u>
Annual increase (%)		34.3	97.3	-0.8	-13.3	5.6	5.9
<u>Total Public Sector Investment</u>	<u>4,400</u>	<u>5,400</u>	<u>7,810</u>	<u>8,310</u>	<u>8,450</u>	<u>9,280</u>	<u>12,900</u>
Annual increase (%)		22.7	44.6	6.4	1.7	9.8	6.8
----- Current prices -----							
<u>Memorandum Items</u>							
Direct government investment	3,000	3,730	4,620	6,300	7,780	9,570	20,020
Capital transfers to public enterprises	1,000/b	1,100	1,450	1,900	2,100	2,300	3,380
Capital participation	390	200	260				
Fertilizer subsidy	200	300	300	300	300	300	-
Recurrent content of development budget	850	920	1,980	1,260	1,560	1,910	4,000
Delayed expenditures	500	-		-	-	-	-
<u>Development Budget Expenditures</u>	<u>5,900</u>	<u>6,400</u>	<u>8,610</u>	<u>9,760</u>	<u>11,740</u>	<u>14,080</u>	<u>27,400</u>

/a It is assumed that much of this falls under the industry and mining program in the projection.

/b This is an estimate based on allocations in the budget to electric power, industry, estates and housing. It includes unspent "delayed expenditures" by public enterprises.

Source: World Bank staff estimates.

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Oil and LNG Revenue Projection - Base Case

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1990/91
<u>OIL</u>							
Total production (million bbl)	573	576	529	650	680	688	730
Taxable production (million bbl)/a	476	480	438	552	586	594	634
Price (\$ per bbl)	32.3	35.5	35.5	38.8	41.8	45.3	69.8
Average production cost (\$ per bbl)/b	3.8	3.8	3.8	4.7	5.2	5.7	8.8
Average government revenue (\$ per bbl)/c	22.6	25.5	25.5	26.5	28.9	31.3	48.2
Budgetary revenue (\$ million)	10,794	12,350	11,163	14,630	16,940	18,590	30,560
(Rp billion)/d	6,746	7,720	6,977	9,140	10,580	11,620	19,100
Total revenue (Rp billion)/e	<u>8,060</u>	<u>9,160</u>	<u>8,417</u>	<u>10,720</u>	<u>12,280</u>	<u>13,460</u>	<u>21,940</u>
<u>LNG</u>							
Production (million MMBTU)/f	438	438	438	508	596	846	1,106
Price (\$ per MMBTU) /g	4.94	6.50	5.50	5.72	6.23	6.76	10.40
Average production cost (\$ per MMBTU)/h	1.62	1.80	1.92	2.08	2.23	2.39	3.20
Average government revenue (\$ per MMBTU)/i	1.89	2.22	2.15	2.18	2.40	2.62	4.32
Government revenue (\$ million)	829	970	940	1,107	1,430	2,220	4,780
(Rp billion)	518	610	590	690	890	1,390	2,990
Budgetary oil and LNG revenues	<u>7,020/k</u>	<u>8,575/l</u>	<u>7,567</u>	<u>9,830</u>	<u>11,470</u>	<u>13,010</u>	<u>22,090</u>
Total Oil and LNG Revenues/e	<u>8,580</u>	<u>9,770</u>	<u>9,007</u>	<u>11,410</u>	<u>13,170</u>	<u>14,850</u>	<u>24,930</u>
at 1980/81 prices	8,580	<u>8,880/l</u>	<u>7,311</u>	<u>8,380</u>	<u>8,400</u>	<u>9,170</u>	<u>10,470</u>
as % GDP/j	19.6	18.9	14.0	15.4	15.2	14.6	11.6
Price index for government expenditure	100	110	123	136	148	162	238

/a Excludes Pertamina (5%) and pro rata supplies from contract of works (65 mby).

/b On basis of taxable production. First semester figures are used for 1981/82, and a 3% increase above the international rate of inflation thereafter.

/c Assumes average tax rate of 79% on operating income from taxable production.

/d At an exchange rate of \$1 = Rp 625.

/e Includes the value of pro rata supplies (see discussion in text).

/f Assumes existing plant will maintain current production and new plant will come on-stream as in last year's economic report.

/g Assumed to be 100% linked to oil from 1982/83.

/h Includes cost recovery and debt service. This is assumed to remain constant in real terms.

/i Assumes average tax rate of 60% on operating income.

/j Assumes growth is sustained at 7.5% p.a.

/k Excludes Rp 245 billion carried forward to 1981/82.

/l Including the Rp 245 billion from 1980/81.

Source: Ministry of Finance 1980/81-1981/82 and Bank staff projections.

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Budgetary Subsidy on Oil Products - High Case

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1990/91
Domestic consumption (million bbl)/a	144	164	180	197	215	236	347
Pro rata supplies (million bbl)/b	65	65	65	65	65	65	65
<u>Expenditures</u>							
Price of crude (\$ per bbl)/b	32.3	35.5	35.5	38.3	41.8	45.3	69.8
Other costs (\$ per bbl)/c	9.8	11.4	12.4	13.4	13.5	14.5	19.4
Total unit cost (\$ per bbl) (Rp per bbl)	42.1	46.9	47.9	51.7	55.3	59.8	89.2
Gross expenditures (Rp billion)	26,320	29,310	29,770	32,310	34,560	37,380	55,750
Less value of pro rata (Rp billion)	3,790	4,810	5,360	6,370	7,430	8,820	19,350
Net expenditures (Rp billion)	1,310	1,440	1,440	1,560	1,700	1,840	2,840
	<u>2,480</u>	<u>3,370</u>	<u>3,860</u>	<u>4,810</u>	<u>5,730</u>	<u>6,980</u>	<u>16,510</u>
<u>Receipts</u>							
Domestic price (Rp per bbl)/d	10,160	12,110	16,630	19,690	22,950	26,910	55,750
Total receipts (Rp billion)	<u>1,460</u>	<u>1,990</u>	<u>2,990</u>	<u>3,880</u>	<u>4,930</u>	<u>6,350</u>	<u>19,350</u>
Budgetary subsidy (Rp billion)/e at 1980/81 prices	1,020	1,380	930	930	800	630	-2,840
as % GDP	2.2	2.7	1.5	1.3	0.9	0.6	(1.3)
Economic subsidy at current prices /f at 1980/81 prices	2,330	2,820	2,360	2,490	2,500	2,470	-
as % GDP	5.3	5.4	3.8	3.4	2.9	2.4	0
Price index of government expenditure	100	110	123	136	148	162	238

- /a In crude equivalent. The projection assumes an income elasticity of 1.7 to 1985/86 and 1.5 thereafter and a long-run own-price elasticity of -0.3. As a result consumption grows at 14% in 1981/82, 9.5% through 1985/86 and 8% thereafter.
- /b A constant level of 65 mby is taken on the grounds that rising production will be compensated by a falling share of contract of works. The role of pro rata from production sharing companies is still not completely clear.
- /c This includes refining and distribution costs plus net costs of foreign trade in products; it is assumed to rise at the international rate of inflation, with some cost reduction when Indonesia becomes self-sufficient in kerosene production.
- /d This is assumed to rise smoothly to the international level, inclusive of costs, by 1990/91; this requires an increase of 7% p.a. above the domestic rate of inflation from 1983/84.
- /e A negative value indicates a net flow into the treasury.
- /f This is the difference between international and domestic pricing of petroleum products. It is given here by gross expenditures (before deducting the value of pro rata) less receipts.

Source: World Bank staff estimates.

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Nonoil Tax Revenue - High Case
(Rp billion, current prices)

	1980/81 Actual	1981/82 Budget	1982/83 Budget	1983/84 -----	1984/85 Projected	1985/86 -----	1990/91 -----
<u>Taxes on Income</u>	<u>1,210</u>	<u>1,460</u>	<u>1,990</u>	<u>2,420</u>	<u>2,940</u>	<u>3,560</u>	
Personal income tax	164	210	260	310	380	450	
Corporate income tax	448	560	820	1,010	1,240	1,530	
Withholding (MPO)	433	510	680	820	980	1,170	
IPEDA	87	90	110	140	190	230	
Other	78	100	120	140	150	180	
<u>Taxes on Domestic Consumption</u>	<u>733</u>	<u>880</u>	<u>1,100</u>	<u>1,370</u>	<u>1,700</u>	<u>2,110</u>	
Sales tax	266	290	440	560	700	880	
Excise & others	467	580	660	810	1,000	1,230	
<u>Taxes on International Trade</u>	<u>948</u>	<u>1,140</u>	<u>1,150</u>	<u>1,540</u>	<u>1,850</u>	<u>2,220</u>	
Duties & sales tax on imports	643	760	980	1,160	1,380	1,640	
Duties on exports	305	380	170	380	470	580	
<u>Total Nonoil Tax Revenue</u>	<u>2,890</u>	<u>3,470</u>	<u>4,240</u>	<u>5,330</u>	<u>6,490</u>	<u>7,890</u>	<u>18,800</u>
Nontax receipts	320	220	390	430	470	520	760
<u>Total Nonoil Revenues</u>	<u>3,210</u>	<u>3,690</u>	<u>4,630</u>	<u>5,760</u>	<u>6,960</u>	<u>8,410</u>	<u>19,560</u>

Source: Ministry of Finance and World Bank staff estimates.

INDONESIACOUNTRY ECONOMIC MEMORANDUMSummary of Domestic Revenues - High Case
(Rp billion, current prices)

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1990/91
<u>Domestic Oil Tax</u>	<u>-0.3</u>	<u>-0.2</u>	<u>0.5</u>	<u>0.7</u>	<u>1.4</u>	<u>2.1</u>	<u>10.5</u>
Potential revenues	2.0	2.6	2.9	3.2	3.9	4.6	10.5
Less economic subsidy	2.3	2.8	2.4	2.5	2.5	2.5	-
<u>Nonoil Taxes</u>	<u>2.4</u>	<u>2.9</u>	<u>3.7</u>	<u>4.9</u>	<u>6.1</u>	<u>7.6</u>	<u>18.8</u>
Taxes	2.9	3.5	4.2	5.3	6.5	7.9	18.8
Less nonoil subsidies	0.5	0.6	0.5	0.4	0.4	0.3	-
Nontax revenues	0.3	0.2	0.4	0.4	0.5	0.5	0.8
<u>Total Domestic Revenues</u>	<u>2.4</u>	<u>2.9</u>	<u>4.6</u>	<u>6.0</u>	<u>8.0</u>	<u>10.2</u>	<u>30.1</u>
Oil export tax	6.6	7.2	6.1	8.2	9.3	10.3	14.4
<u>Total Revenues</u>	<u>9.0</u>	<u>10.1</u>	<u>10.7</u>	<u>14.2</u>	<u>17.3</u>	<u>20.5</u>	<u>44.5</u>

Source: World Bank staff estimates.

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Projection of National Accounts Statistics - High Case
(Rp trillion, 1980/81 prices)

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1990/91
GDP	43.77	47.1	50.6	54.4	58.5	62.8	90.2
Investment	9.49	10.9	13.8	14.9	15.7	17.1	24.9
Public	4.40	5.4	7.8	8.3	8.5	9.3	12.9
Government	3.00	3.5	4.1	4.6	5.3	5.9	8.4
Public enterprise	1.40	1.9	3.7	3.7	3.2	3.4	4.5
Private	5.08	5.5	6.0	6.6	7.2	7.8	12.0
Consumption	30.61	36.6	37.6	40.3	43.6	46.2	66.6
Public	4.30	4.7	4.7	5.2	5.7	6.3	9.9
Private <u>/a</u>	26.31	31.9	32.9	35.1	37.9	39.9	56.7
Resource balance (net exports of goods and nonfactor services)	3.67	-0.4	-0.8	-0.8	-0.8	-0.5	-1.3
Gross domestic savings <u>/b</u>	13.16	10.5	13.0	14.1	14.9	16.6	23.6
Public <u>/c</u>	4.70	4.5	4.9	5.3	5.9	6.4	9.5
Private <u>/a</u>	8.46	6.0	8.1	8.8	9.0	10.2	14.1
Net domestic taxation <u>/d</u>	2.10	2.5	3.4	4.1	5.1	6.0	12.3
Disposable income, nonoil sector <u>/e</u>	29.95	31.9	33.5	35.6	37.6	39.8	53.5
Consumption, nonoil sector <u>/f</u>	21.39	25.9	25.4	26.8	32.5	29.6	39.4

/a Residual./b Derived from GDP and consumption estimates./c Government only, before debt service./d Includes domestic oil tax./e Output of nonoil sector less net domestic taxes./f Disposable income less private savings; this is likely to be an underestimate.

Source: World Bank staff estimates.

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Population, Labor Force and Employment - Technical Appendix

The purpose of this Appendix is to provide the statistical and methodological basis for the demographic trends and labor force and employment projections given in Part II of this report. In Section I of this Appendix, estimates of infant mortality, crude death rate, crude birth rate, and a set of population projections are presented. In Section II, labor force and employment data from the different censuses and surveys are reviewed and, based on the data from the 1971 census and (preliminary) 1980 census results, the labor force participation rates by age are extrapolated to 1985, and 1990, to obtain labor force projections. 1971 and 1980 data on sectoral employment and sectoral value added are used to prepare 1985 and 1990 sectoral employment forecasts. In addition to the generally well-known limitations of these exercises, it should be stressed that the 1980 data are still preliminary and not yet officially released.

I. Mortality, Fertility and Population Projections

1. In the absence of a reliable vital registration system, it is necessary to depend on indirect estimates of mortality and fertility levels. With regard to mortality, one procedure is to obtain estimates of infant mortality based on information on the average number of children ever born and the average number still living by age of mothers, and then to apply the appropriate "model life tables" to obtain age-specific mortality schedules and derive crude death rates.^{/1} Once the crude death rate for a period is estimated, the birth rate can be obtained by subtracting the death rate from the population growth rate. Data on the average number of children ever born and surviving were collected in Indonesia in the 1961 and 1971 Censuses, the 1973 Fertility - Mortality Survey, the 1976 Intercensal Population Survey, and the 1980 Census. In this section, infant mortality and crude death rates are estimated from the 1971 and 1980 census data,^{/1} and population projections are presented up to the year 2000.

^{/1} The estimation procedures have been described and illustrated in the U.N. Manual entitled Methods of Estimating Basic Demographic Measures from Incomplete Data (New York: U.N., 1976). The limitations of the data arising from mis-statements of the numbers of children ever born, age of mother, and recall lapse on mortality of children affect the estimates.

Estimates of Infant Mortality and Life Expectancy

2. The data on the average numbers of children born and children surviving are available from the 1971 and 1980 censuses by five-year age groups of women. Such data when considered for women aged 15-19, reflect (approximately) the infant mortality experience of one year prior to the census date. However, it is generally considered that births in the 15-19 age group may not be numerically large enough to portray the mortality experience accurately. Data on the the children born and surviving taken for women aged 20-24 are usually more reliable and provide the infant mortality experience of the period about two years prior to the census date. Thus, the 1971 and 1980 census data pertaining to children of women aged 20-24 can be used to estimate infant mortality and life expectancy for the years 1969 and 1978 respectively.^{/2} These estimates are given in Tables 1 and 2 of this Annex. During 1969-78, for Indonesia as a whole, infant mortality declined from 140 to 105. The initial levels and magnitude of decline, however, differ significantly across regions. The average life expectancy increased from 47 to 53 years between 1969 and 1978; all the regions have experienced improvements, but the extent varies among regions.

Trends in Birth and Death Rates

3. Indirect estimates of the crude birth and death rates were obtained as follows for the census years 1971 and 1980. First, the "model life tables" for these two years were identified on the basis of interpolation/extrapolation of the infant mortality estimates in Tables 1 and 2 of this Annex. From the model life tables so identified, the age-specific death

^{/1} For earlier estimates of infant mortality, using similar data and techniques, see N. Iskandar, An Estimate of Basic Demographic Parameters for Indonesia as of around 1960 (Lembaga Demografi, University of Indonesia); Peter F. McDonald, Mohammad Yasin and Gavin W. Jones, Levels and Trends in Fertility and Childhood Mortality in Indonesia, (Indonesia Fertility, Mortality survey 1973, Monograph 1, Lembaga Demografi, University of Indonesia); Geoffrey McNicoll and Si Gde Made Mamas, The Demographic Situation in Indonesia (Central Bureau of Statistics, 1973); and Terence H. Hull and Sunaryo, Levels and Trends of Infant and Child Mortality in Indonesia (Working Paper, Population Institute, University of Gajah Mada, November, 1978).

^{/2} Estimates were also prepared for 1974, based on the data from the 1976 intercensal population survey. These estimates tended to imply a larger annual rate of decline in infant mortality during 1969-74 and a smaller annual rate of decline during 1974-78. This somewhat unexpected trend needs further scrutiny.

rates were determined and these, along with the 1971 and 1980 age data,^{/1} were used to estimate crude death rates. The estimates were 16.7 for 1971 and 13.0 for 1980. From these rates and the recorded population growth rates, the birth rate estimates were obtained. Average annual population growth rates for 1961-71 and 1971-80 were 2.1% and 2.3% respectively. Given the relative declines of mortality and fertility during those periods the 1971 and 1980 population growth rates are estimated at 2.4% and 2.2% respectively. From these estimates the following crude birth rates were derived:

ESTIMATED VITAL RATES
(per thousand)

	1971	1980
Crude death rate	16.7	13.0
Population growth rate	24.0	22.0
Crude birth rate	40.7	35.0

Source: Tables 1-3, Annex II.

4. These estimates imply a 22% decline in the crude death rate and a 14% decline in the crude birth rate; these magnitudes are tentative, but are the best available at this time.

Preliminary Population Projections

5. Estimating the size and composition of the future population is an essential first step in discussing economic and social development needs and priorities. A revised set of population projections is required in view of the higher than anticipated population growth rate implied by the results of the 1980 census and in order to incorporate the age-sex data from the census.^{/2}

^{/1} Suitably graduated age data were used rather than the reported data. For 1961 the graduated age data are from Widjojo Nitisastro, Population Trends in Indonesia, Cornell, 1970. For 1971 they are from LEKNAS; quoted in World Bank: Employment and Income Distribution in Indonesia, 1981, draft. The 1980 graduated data are estimates made by Bank staff.

^{/2} Most of the earlier population projections anticipated a population size of around 140 to 142 million for late 1980, as against the 147 million enumerated in the 1980 Census. For an interesting discussion of these results, see T.H. Hull, "Indonesia's Population Growth, 1971-1980," B.I.E.S., March 1981.

6. The crucial factor in a projection exercise is the expected course of fertility and mortality. Pending further analytical studies on the basis of the full results of the 1980 census, the assumptions about fertility and mortality trends are mostly based on extrapolations of past trends and the experiences of other countries with similar emphases on family planning and health services (see Chapter 5). The following table summarizes the expected levels of the vital rates and the rates of population growth:

HISTORIC AND PROJECTED VITAL RATES

Year	Mid-year populations (millions)	Vital rates (per 1000 population)		Population growth rate (% p.a.)	% decline in	
		Crude birth rate	Crude death rate		Crude birth rate	Crude death rate
1971	118.6	40.7	16.7	2.40		
1980	146.6	35.0	13.0	2.20	14.0	22.2
1985	162.8	32.4	11.8	2.06		
1990	180.0	30.0	10.4	1.96	14.3	20.0
1995	198.1	27.9	9.4	1.85		
2000	216.7	25.6	8.6	1.70	14.7	17.3

Source: Tables 1-3, Annex II.

7. In the projections that follow it is assumed that the birth rate will decline by about 14% during the 1980s and by a further 15% in the 1990s due principally to the continued rapid expansion of the family planning program. These anticipated rates of decline are not much different from that experienced in the 1970s (14%) and are relatively conservative compared to the targets set by the National Family Planning Board (BKKBN) and incorporated in Repelita III. The target was to reduce the birth rate by 50% by 1990 from its level in 1970 (assumed to be 44).^{/1} The mortality

^{/1} If the 50% decline in CBR is expected to be a smooth decline, the 1980 CBR should be around 31 instead of the estimated of 35 noted above. The BKKBN target amounts to an average 2% decline per annum. The 1971-80 reduction was at a rate of 1.5%, higher than the average annual rate of reduction in low income countries (1.3%) and middle income countries (0.8%) during the 1960-79 period.

assumptions for the future take into account the scope that still exists for infant and child mortality reduction. The good progress achieved during the 1970s is expected to continue throughout the present decade (see Chapter 5) with reductions in infant mortality beginning to taper off in the early 1990s.

8. These assumptions are incorporated in the population projections presented in Table 3 of this Annex. The projections imply that the net reproduction rate ^{/1} will decline from its current level of about 1.7 to 1.0 by the year 2020, at which time Indonesia's population is projected to have reached 283 million.

II. Labor Force and Employment

Sources of Data and Problems of Data Comparability

9. The following is a list of the censuses and surveys which are the principal sources of information on labor force and employment; (a) the 1961 (September) census, (b) the 1971 (September) census, (c) the 1976 (March - April) intercensal survey, (d) the 1976 (September - December) labor force survey, (e) the 1977 (February - November) labor force survey, (f) the 1978 (February - November) labor force survey, and (g) the 1980 (October) census.

10. For purposes of the analysis and projections of labor force and employment trends in Chapter 4 of this report, only the 1971 census and the 1980 census data were used. Data from the other sources were discarded on grounds of incomparability, for reasons discussed below.

11. Three key elements influence the comparability of data from different survey sources: (a) the definition of employment; (b) the season of the year in which the survey was undertaken; and (c) the breadth of coverage of the survey and the methodology of data collection. These aspects are reviewed here briefly.

12. Definition of employment and participation. Two elements are involved here which can hinder comparability among surveys. One is the

^{/1} The net reproduction rate is defined as the average number of female births to a woman in her total reproductive age span, measured on the basis of a cohort of women. The rate indicates the extent to which a given generation assures its replacement. The significance of NRR=1 is that the level if maintained, ensures that the population will cease to grow. For Indonesia, it is assumed that NRR=1 from 2020 onwards. Consequently after 2085, after attaining the size of 377 million, the population will cease to grow.

"reference period" (i.e. the period over which the respondent is required to recall his activity status). The second is the "cut-off" (i.e. the length of time during the reference period in which the respondent must be employed to be counted as employed). The 1961 census effectively used a reference period of six months to collect data on the employed and the unemployed. A respondent who was not working at the time of the census was considered as employed if he worked for a minimum of two months in the past six months. This would naturally "inflate" the employed population as well as the total labor force, when compared to data obtained on the basis of a fixed reference period of a relatively shorter duration (as in 1971 for instance). The very high participation rates for males in 1961 compared to 1971 (see Table 4 of this Annex.) were mostly the result of this extended reference period.

13. In the 1971 census, the reference period was a week and the labor force consisted of those who worked for at least two days in the reference week (the employed) and those who were seeking work in the reference period (the unemployed). Relative to 1961, the male labor force participation rates are lower across all age groups. It is very difficult, therefore, to compare the 1961 and 1971 data since they have not been obtained on a uniform basis.

14. The intercensal survey 1976 and the various labor force surveys (1976, 1977 and 1978) used a reference period of one week and anyone working for one hour or more during the week was counted as employed. The 1976 and 1977/78 participation rates were much higher than the 1971 rates. Two possible reasons for the lower rates in 1971 were: (a) they referred to the slack season in Indonesian agriculture; and (b) these rates were based on a minimum two days cut-off whereas the rates from the subsequent survey were based on a one hour cut-off. These differences appear to influence the participation rates for females more than for males. In the 1971 census an additional question was asked: "Did you work in agriculture during the last season?" From the answer to this question, a working force of 36 million was found in agriculture as against the 26 million recorded on the basis of the one week reference period and the two days cut-off. About 60% of the "last season" workers were women and about 60% of those women worked as unpaid family workers. This gives a rough impression of the tremendous flexibility of labor supply in Indonesia in so far as housewives and others (e.g. old people above 65 and children and youth in schools), who are not normally in the labor force, may enter the labor force during the peak season in agriculture.

15. The effect of the "cut-off" (minimum two days versus minimum one hour) on the participation rates is unclear. The only source giving information on the basis of both cut-offs is the 1980 census (see Table 4 of this Annex). Based on advance tabulations, it was found that the effect of the cut-off on the participation rates appears to be small.

16. Seasonality. The season of the year at which surveys were taken can also significantly improve the comparability of data sources. The 1976 intercensal survey of March-April and the 1976 labor force survey of September-December illustrate some of the problems involved. The recorded agricultural employment was 36 million persons in March and only 29 million in September-December. If these numbers are taken as accurate, the total employment in the "peak" season (March) in 1971 was identical to that in 1976, which seems unlikely. On the other hand, employment in agriculture during the slack season (September) was 3 million higher in 1976 than in 1971. These two findings are not necessarily inconsistent since a narrowing of the peak-slack gap is to be expected with the spread of irrigation credit, and the consequent opportunity for year-round work in agriculture. It appears as though the peak season activity may indeed have become short-lived; the 1977/78 participation rates (averaged over February, May August, November in each year) are almost identical across age groups to the rates of September-December 1976./1

17. It is clear from the above discussion that although it is not possible to accurately measure the impact of seasonal influences, they do affect the labor force participation rates, especially those of females. Thus, data comparability can be ensured by choosing similar seasons and reference periods, such as the 1971 and 1980 censuses.

18. Consistency and plausibility. This tentative judgment for selecting 1971 and 1980 data sources is further strengthened by a consideration of the labor force growth rates implied by the various surveys, which can be summarized as follows:

/1 Thus, while the peak season activity is of considerable importance to various household members who have to "program" their time in readiness for work during that season, it appears as though the extra load of the peak season can be taken care of by temporary shifts in labor force participation rather than by more permanent shifts (which will be reflected in higher average participation rates).

Year	Labor force ('000) /a	Annual growth rate (%)	
1971	42,086 }		
	}	5.19 }	
1976	54,191 }		
	}	-5.09 }	
1977	51,431 }		2.86
	}	8.90 }	
1978	56,007 }		
	}	-3.13 }	
1980	54,255 }		

/a The size of the labor force observed in the 1976, 1977 and 1978 surveys was adjusted for coverage in line with the total population counted in 1980. In 1980. In addition, the 1971 and 1980 data are adjusted to reflect the corrected age-distribution of the population and mid-year estimate of the total population.

Source: as for Table 4, Annex II.

19. The 1971-80 annual labor force growth rate of 2.9% is plausible, given the 2.3% annual increase in total population and the implied 2.6% increase in the population aged 10 and above, and the observed increases in labor force participation rates among females over all the age groups. In contrast, the intercensal growth rates of labor force, based on the survey data for 1976, 1977 and 1978, gives results which appear unreasonable.

20. The need to consider only the 1971 and 1980 data, disregarding the wealth of information in the intercensal surveys, is also established by the differences in the sectoral employment trends implied by the various data sets. For instance, a case can be made against the use of the data from the other surveys by considering the employment growth in the construction sector implied by the data. During 1971-76, employment in construction increased at a positive rate only if one compares the 1971 census data (which refers to the so-called slack season) and the peak season data for 1976 (but not the slack season data). During 1976-78, employment in construction stagnated according to the survey data and then jumped 100% during 1978-80 if the 1978 survey data is compared with the 1980 census data. Needless to say these changes are unlikely; the implication here is that it is dangerous to make inferences about sectoral trends on the basis of combinations of data from the censuses and surveys.

21. In earlier World Bank reports, in the absence of 1980 census data, some simple methods were used to achieve data comparability, since the 1971 data did not fall in line with the 1961 and the 1976 data. The 1971 census data were ignored and estimated values were used instead. These estimates were obtained by interpolating the 1961 and 1971 data./1 The problem of now adopting such an adjustment is that it calls for an adjustment of the 1980 census data as well, and there is no clear-cut basis on which to make this adjustment./2 For the present, therefore, it appears reasonable to consider the 1971 and 1980 data without any adjustments, notwithstanding the fact that this is a tentative solution to a problem that needs continuous study.

Labor Force and Employment Projections

22. In line with the data preferences expressed above, the labor force projections in Table 6 of this Annex are based on (a) linear extrapolations of the 1971 and 1980 age-specific labor force participation rates and (b) the population projections in Table 3 of this Annex. During the 1970s, the labor force grew at an annual rate of 2.9%. In the 1980's it is projected to grow at a rate of about 3% per year./1 The size of the labor force is projected for the off-peak season. The average rate for the year as a whole would therefore be higher than projected. Some people, notably women, join the labor force only during the peak agricultural seasons. In the future, with increased modernization of the society, it is possible that these people will also seek jobs during off-peak seasons. To the extent that this occurs, participation rates, and consequently unemployment rates would be higher than projected.

23. The employment projections presented in Table 6 of this Annex are illustrative only. They are based on the assumption that the responsiveness of employment to the growth in value added by sector will remain constant. Sectoral output growth rates are derived from the macro-economic analysis of Chapter 3.

/1 See e.g., World Bank: Employment and Income Distribution in Indonesia, February 1979. In this report 1971 participation rates were derived by linear interpolation of the 1961 and 1976 (September-December) data. In last year's economic report, the 1971 estimates were obtained by interpolation between the 1961 and the average 1977/78 participation rates.

/2 It certainly does not make sense to continue using the 1961 data and data from post-1971 surveys as a basis for estimating the 1971 data on the one hand and projections beyond 1980 on the other.

/3 For the decade as a whole, this rate is consistent with the analysis found in World Bank: Wages and Employment in Indonesia; draft, September 1981, even though in that report labor force projections were based on the 1961 and 1976 data. In that report, the labor force is projected to grow at 2.8% between 1980-85 and 3.3% between 1985-90.

Table 1: ESTIMATES OF INFANT MORTALITY AND EXPECTATION OF LIFE
AT BIRTH FOR 1969 FROM SURVIVAL RATES OF CHILDREN BORN TO WOMEN
AGED 20-24, 1971 CENSUS DATA

Province/Island (1)	Average number of children per woman aged 20-24		Model life table level (4)	Infant mortality rate			Expectancy of life at birth			
	Ever born P2 (2)	Still alive S2 (3)		Both sexes (7)	Female (5)	Male (6)	Both sexes (7)	Female (8)	Male (9)	Both sexes (10)
Java-Madura	1.39	1.15	12.40	126.6	149.1	137.6	48.5	45.6	47.1	
DKI Jakarta	1.37	1.17	13.69	109.7	129.7	119.4	51.7	48.7	50.2	
West Java	1.72	1.37	10.95	146.9	172.6	159.4	44.9	42.0	43.5	
Central Java	1.30	1.09	12.52	125.0	147.2	135.8	48.8	45.9	47.4	
DI Yogyakarta	0.72	0.65	15.76	84.8	101.8	93.1	56.9	53.6	55.3	
East Java	1.21	1.04	14.11	104.5	123.9	114.0	52.8	49.7	51.3	
Sumatra	1.45	1.21	12.34	127.5	150.1	138.5	48.4	45.5	47.0	
Kalimantan	1.38	1.14	12.29	128.2	150.9	139.3	48.2	45.3	46.8	
Sulawesi	1.31	1.08	11.64	137.2	161.4	149.0	46.6	43.7	45.2	
Other Islands	1.18	0.95	10.65	151.6	177.9	164.4	44.1	41.3	42.7	
<u>Indonesia</u>	<u>1.38</u>	<u>1.14</u>	<u>12.24</u>	<u>128.9</u>	<u>151.7</u>	<u>140.0</u>	<u>48.1</u>	<u>45.2</u>	<u>46.7</u>	

Note: Basic data on children ever born, children living, and the female population by age are obtained from the provincial reports of the 1971 Census (Series E reports). The various steps in the computational procedure to derive infant mortality and life expectancy rates from columns (2) and (3) via (4) are given in the UN Manual on Methods of Estimating Basic Demographic Measures from Incomplete Data (UN, 1976).

Table 2: ESTIMATES OF INFANT MORTALITY AND EXPECTATION OF LIFE
AT BIRTH FOR 1978 FROM SURVIVAL RATES OF CHILDREN BORN TO WOMEN
AGED 20-24, 1980 DATA

Province/Island (1)	Average number of children per woman aged 20-24		Model life table level (4)	Infant mortality rate			Expectancy of life at birth		
	Ever born P2 (2)	Still alive S2 (3)		Female (5)	Male (6)	Both sexes (7)	Female (8)	Male (9)	Both sexes (10)
Java-Madura	1.34	1.16	14.86	95.1	113.4	104.0	54.7	51.5	53.1
DKI Jakarta	1.18	1.06	16.58	72.4	88.1	80.1	59.6	56.1	57.9
West Java	1.57	1.31	12.76	121.6	143.3	132.2	49.4	46.5	48.0
Central Java	1.30	1.15	15.33	89.7	107.2	98.2	55.8	52.6	54.2
DI Yogyakarta	0.80	0.74	18.43	55.8	69.5	62.5	63.6	59.9	61.8
East Java	1.26	1.11	15.56	87.0	104.3	95.4	56.4	53.1	54.8
Sumatra	1.32	1.17	15.80	84.3	101.3	92.6	57.0	53.7	55.4
Kalimantan	1.35	1.17	14.70	97.1	115.6	106.1	56.3	51.1	53.8
Sulawesi	1.09	0.95	14.54	99.1	117.8	108.2	53.9	50.7	52.3
Other Islands	1.13	0.95	12.68	122.7	144.6	133.4	49.2	46.3	47.8
<u>Indonesia</u>	<u>1.31</u>	<u>1.14</u>	<u>14.77</u>	<u>96.3</u>	<u>114.6</u>	<u>105.2</u>	<u>54.4</u>	<u>51.3</u>	<u>52.9</u>

Note: Basic data are from the preliminary tabulations of a sub-sample of the 1980 Census.
See also the note under Table A2.1.

Table 3: POPULATION PROJECTIONS

Age	1980	1985	1990	1995	2000
<u>Females</u>					
0	11,051.0	11,344.0	11,803.5	12,343.8	12,669.6
5	10,116.1	10,655.2	11,016.1	11,532.2	12,122.5
10	8,566.5	9,984.1	10,539.7	10,918.3	11,449.6
15	7,588.3	8,448.0	9,868.4	10,438.5	10,832.6
20	6,700.2	7,445.6	8,313.7	9,737.0	10,323.3
25	5,491.7	6,547.1	7,300.8	8,177.4	9,603.5
30	4,490.7	5,348.5	6,400.9	7,162.5	8,046.9
35	4,077.6	4,357.4	5,211.2	6,260.0	7,028.2
40	3,688.3	3,938.8	4,227.1	5,075.3	6,118.3
45	3,143.9	3,540.0	3,796.7	4,090.9	4,929.6
50	2,537.6	2,981.1	3,372.7	3,633.4	3,931.2
55	1,931.0	2,359.0	2,787.3	3,170.7	3,433.3
60	1,498.9	1,736.7	2,137.7	2,544.0	2,913.4
65	1,094.2	1,277.9	1,495.2	1,857.7	2,230.2
70	870.8	855.9	1,011.9	1,197.9	1,504.9
75+	860.2	960.5	1,012.2	1,163.6	1,385.5
Subtotal	<u>73,707.0</u>	<u>81,779.8</u>	<u>90,295.2</u>	<u>99,303.3</u>	<u>108,522.5</u>
<u>Males</u>					
0	11,485.0	11,691.7	12,183.8	12,757.8	13,110.9
5	10,672.5	11,049.1	11,323.3	11,871.3	12,495.6
10	9,046.4	10,533.3	10,925.1	11,215.1	11,775.8
15	7,469.3	8,920.5	10,405.2	10,809.9	11,113.3
20	6,165.0	7,317.7	8,761.3	10,243.0	10,663.7
25	5,156.3	6,012.1	7,158.7	8,595.8	10,075.9
30	4,306.7	5,014.0	5,867.4	7,009.7	8,442.1
35	3,878.5	4,167.1	4,871.9	5,723.1	6,861.1
40	3,535.3	3,722.8	4,019.3	4,720.2	5,567.6
45	3,026.3	3,353.4	3,550.4	3,852.7	4,545.6
50	2,475.2	2,818.6	3,142.4	3,346.3	3,650.6
55	1,861.5	2,242.8	2,571.7	2,886.1	3,092.3
60	1,397.0	1,616.8	1,964.0	2,269.8	2,566.1
65	971.3	1,137.8	1,330.3	1,631.7	1,903.0
70	689.9	718.0	851.5	1,007.3	1,249.5
75+	713.8	721.4	755.7	870.7	1,037.4
Subtotal	<u>72,850.0</u>	<u>81,037.0</u>	<u>89,681.8</u>	<u>98,810.6</u>	<u>108,150.7</u>
<u>Total</u>	<u>146,557.0</u>	<u>162,816.8</u>	<u>179,977.0</u>	<u>198,113.9</u>	<u>216,673.2</u>
Birth rate	33.6	31.1	29.0	26.8	
Death rate	12.6	11.0	9.8	8.9	
Population increase	21.1	20.0	19.2	17.9	

Table 4: OBSERVED LABOR FORCE PARTICIPATION RATES, 1961-1980

Age group	Census	Census	Survey	Survey	Surveys	Census	Census
	1961 (Sep.)	1971 (Sep.)	1976 (March- April)	1976 (Sep.- Dec.)	1977-1978 Averages for Feb., May, Aug., Nov.	1980 (A) (Oct.)	1980 (B) (Oct.)
<u>Males</u>							
10-14	22.7	18.3	26.1	16.7	16.5	17.9	18.3
15-19	66.7	52.8	66.4	58.8	58.9	50.8	51.4
20-24	87.2	79.2	88.3	87.1	87.1	82.2	82.7
25-44	95.5	93.6	98.2	98.6	98.2	94.5	95.1
45-54	95.6	91.6	97.0	95.4	96.1	92.1	92.6
55-64	89.6	82.2	90.3	85.3	85.7	81.4	82.1
65+	72.8	62.2	69.6	60.9	62.6	56.0	56.7
<u>Total</u>	<u>79.8</u>	<u>70.3</u>	<u>77.1</u>	<u>73.8</u>	<u>73.6</u>	<u>70.0</u>	<u>70.6</u>
<u>Females</u>							
10-14	15.6	13.7	20.9	10.9	10.1	15.0	15.3
15-19	30.6	30.8	45.4	34.2	35.4	34.7	35.2
20-24	27.4	33.4	48.5	37.5	37.2	36.9	37.4
25-44	29.6	39.5	55.2	45.8	47.5	43.1	43.4
45-54	39.8	44.0	61.7	50.5	52.2	48.2	48.8
55-64	39.1	37.2	51.2	40.3	41.9	39.3	40.0
65+	27.8	24.0	30.9	20.0	23.8	23.0	23.5
<u>Total</u>	<u>29.4</u>	<u>33.1</u>	<u>46.5</u>	<u>36.8</u>	<u>39.8</u>	<u>35.9</u>	<u>36.4</u>

Census 1961: Population Census 1961. Those currently working and those who worked for 2 months or more in the past six months were counted as "working."

Census 1971: Series D. Those working 2 days or more in the reference week defined as "working."

Survey 1976: Inter-censal Survey and National Labor Force Survey. Those working for at least one hour in the reference week were counted as "working."

Surveys 1977-1978: National Labor Force Surveys. Working population defined as in 1976.

Census 1980 A: Those working 2 days or more in the reference week defined as "working."

Census 1980 B: Those working at least one hour in the reference week defined as "working."

Table 5: LABOR FORCE PARTICIPATION RATES AND LABOR FORCE PROJECTIONS FOR 1980, 1985, 1990

Age group	Labor force participation rates /a				Mid-year population ('000) /b				Labor force ('000)			
	1971	1980	1985	1990	1971	1980	1985	1990	1971	1980	1985	1990
Males												
10-14	18.3	17.9	17.7	17.5	7,242	9,046	10,533	10,925	1,325	1,619	1,864	1,912
15-19	52.8	50.8	49.7	48.6	6,006	7,469	8,921	10,405	3,171	3,794	4,434	5,507
20-24	79.2	82.2	83.9	85.6	4,204	6,165	7,318	8,761	3,330	5,068	6,140	7,499
25-44	93.6	94.5	95.0	95.5	14,479	16,877	18,916	21,917	13,552	15,949	17,970	20,931
45-54	91.6	92.1	92.4	92.7	4,299	5,505	6,172	6,693	3,938	5,067	5,703	6,204
55-64	82.2	81.4	81.0	80.6	2,524	3,258	3,860	4,536	2,075	2,652	3,127	3,656
65+	62.2	56.0	52.6	49.2	1,488	2,375	2,577	2,938	296	1,330	1,356	1,445
Total	(69.8)	(70.0)	(69.6)	(70.6)	40,242	50,692	58,297	66,175	28,317	35,479	40,594	46,704
Females												
10-14	13.7	15.0	15.7	16.4	7,124	8,567	9,984	10,540	976	1,285	1,567	1,729
15-19	30.8	34.7	36.9	39.1	6,159	7,588	8,448	9,868	1,897	2,633	3,117	3,858
20-24	33.4	36.9	38.8	40.7	4,529	6,700	7,446	8,314	1,513	2,472	2,889	3,384
25-44	39.5	43.1	45.1	47.1	14,686	17,748	20,192	23,140	5,801	7,649	9,107	10,899
45-54	44.0	48.2	50.5	52.8	4,576	5,682	6,521	7,169	2,013	2,739	3,293	3,785
55-64	37.2	39.3	40.4	41.5	2,955	3,430	4,096	4,925	1,099	1,348	1,655	2,044
65+	24.0	23.0	23.0/c	23.0/c	1,958	2,825	3,094	3,519	470	650	712	809
Total	(32.8)	(35.7)	(37.4)	(39.3)	41,987	52,540	59,781	67,475	13,769	18,776	22,340	26,508
Total Both Sexes	(50.9)	(52.6)	(53.3)	(54.8)	82,229	103,232	118,078	133,650	42,086	54,255	62,934	73,212
Annual growth rate (%)					2.56	2.72	2.51		2.86	3.01	3.07	

/a Rates for 1985 and 1990 are linear extrapolations of the 1971-80 data.
 /b 1971 and 1980 age data are graduated to eliminate biases due to mis-reporting.
 /c Assumed to be same as 1980 rates.

Table 6. PROJECTED EMPLOYMENT, 1980-90

Sector	1971-80 sectoral employment elasticity/ <u>a</u>	Projected values 1980-90		Employment (million)		
		Value added growth rate (% p.a.)	Employment growth rate (% p.a.)	1980	1985	1990
Agriculture	0.18	3.6	0.6	28.8	29.7	30.6
Industry	0.46	10.7	4.9	6.6	8.4	10.6
Services	0.66	7.3	4.8	16.6	21.0	26.5
Total all sectors		7.5	2.8	52.0	59.1	67.7
Total labor force				54.3	62.9	73.2
Unemployment rate (%)				4.1	6.0	7.5

/a Percentage change in employment divided by percentage change in value added.

Table 7: INPRES PROGRAMS: ALLOCATIONS AND EMPLOYMENT GENERATION

Year	Total allocation (Rp bln.)	Percentage allocation by category						Estimated employment /c ('000 man-years)
		Gen- eral /a	Schools	Health	Mar- kets /b	For- estry	Roads	
1969/70	5	100	-	-	-	-	-	-
1970/71	32	100	-	-	-	-	-	265
1971/72	35	100	-	-	-	-	-	282
1972/73	39	100	-	-	-	-	-	295
1973/74	63	73	27	-	-	-	-	436
1974/75	123	80	16	4	-	-	-	696
1975/76	183	65	27	8	-	-	-	970
1976/77	258	56	22	8	8	6	-	965
1977/78	328	51	26	8	8	7	-	1,046
1978/79	386	47	29	7	8	9	-	986
1979/80	469	47	29	6	6	9	3	976
1980/81	757	45	33	7	6	6	3	1,335
1981/82	1,076	42	35	7	5	6	5	1,508
1982/83	1,486	36	49	7	6	6	5	n/a

/a Includes provincial, district, (kabupaten), and village (desa) programs.

/b Includes credit from the banking system, equal to about 80% of the total. This component estimated for 1982/83.

/c Includes direct (on-the-job) and indirect (manufacture of materials) employment generated by the program, 300 working days per year assumed.

Source: World Bank estimates from: INPRES Programs - Their Impacts and Prospects, background paper.

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Population 1930, 1961, 1971, 1980: Average Annual Growth Rates, 1930-80
and Population Density, by Region and Province
(⁰⁰⁰)

Region	Census				Growth rate (%)			Density (persons/sq km)	
	1930	1961/ ^a	1971/ ^a	1980	1930-61	1961-71	1971-80	1971	1980
<u>Java</u>	<u>41,718</u>	<u>62,993</u>	<u>76,103</u>	<u>91,282</u>	<u>1.3</u>	<u>1.9</u>	<u>2.0</u>	<u>576</u>	<u>691</u>
DKI Jakarta	811	2,907	4,576	6,506	4.2	4.6	4.0	7,756	11,027
West Java	10,586	17,615	21,633	27,490	1.7	2.1	2.7	467	593
Central Java	13,706	18,407	21,877	25,365	1.0	1.7	1.7	640	742
DI Jogjakarta	1,559	2,241	2,490	2,745	1.2	1.1	1.1	786	866
East Java	15,056	21,823	25,527	29,175	1.2	1.6	1.5	533	609
<u>Sumatra</u>	<u>8,255</u>	<u>15,743</u>	<u>20,813</u>	<u>27,980</u>	<u>2.1</u>	<u>2.8</u>	<u>3.3</u>	<u>44</u>	<u>59</u>
Lampung	361	1,668	2,777	4,622	5.1	5.2	5.8	83	138
Bengkulu	323	406	519	768	0.7	2.5	4.4	25	37
South Sumatra	1,378	2,773	3,444	4,621	2.3	2.2	3.3	33	44
Riau	493	1,235	1,642	2,163	3.0	2.9	3.1	17	22
Jambi	245	744	1,006	1,440	3.6	3.1	4.1	22	32
West Sumatra	1,910	2,319	2,793	3,402	0.6	1.9	2.2	56	68
North Sumatra	2,541	4,969	6,623	8,357	2.2	2.9	2.6	94	119
Aceh	1,003	1,629	2,009	2,608	1.6	2.1	2.9	36	47
<u>Kalimantan</u>	<u>2,169</u>	<u>4,102</u>	<u>5,153</u>	<u>6,721</u>	<u>2.1</u>	<u>2.3</u>	<u>3.0</u>	<u>10</u>	<u>13</u>
West Kalimantan	802	1,581	2,020	2,483	2.2	2.5	2.3	14	17
Central Kalimantan	203	497	700	950	2.9	3.5	3.5	5	7
South Kalimantan	836	1,473	1,699	2,069	1.8	1.4	2.2	45	55
East Kalimantan	329	551	734	1,219	1.7	2.9	5.8	4	7
<u>Sulawesi</u>	<u>4,232</u>	<u>7,079</u>	<u>8,535</u>	<u>10,377</u>	<u>1.9</u>	<u>1.9</u>	<u>2.2</u>	<u>45</u>	<u>55</u>
Central Sulawesi	390	652	914	1,289	1.7	3.4	3.9	13	18
North Sulawesi	748	1,351	1,718	2,091	1.9	2.4	2.2	90	110
South Sulawesi	2,657	4,517	5,189	6,054	1.7	1.4	1.7	71	83
Southeast Sulawesi	436	559	714	943	0.8	2.5	3.1	26	34
Bali	1,101	1,783	2,210	2,470	1.6	1.8	1.7	381	426
West Nusa Tenggara	1,016	1,808	2,202	2,724	1.9	2.0	2.4	109	135
East Nusa Tenggara	1,343	1,967	2,295	2,722	1.2	1.6	1.9	48	57
Maluku	579	790	1,089	1,407	1.0	3.3	2.9	15	19
Irian Jaya	179	758	923	1,146	4.8	2.0	2.4	2	3
East Timor	n.a.	n.a.	n.a.	553	n.a.	n.a.	n.a.	n.a.	n.a.
<u>Total Indonesia</u>	<u>60,593</u>	<u>97,019</u>	<u>119,233</u>	<u>147,383</u>	<u>1.5</u>	<u>2.1</u>	<u>2.3</u>	<u>63</u>	<u>78</u>

n.a. = not available.

^a Includes adjustment for the exclusion of rural Irian Jaya.Sources: Population Census Reports, 1961 and 1971, Preliminary Results, 1980 Census; and Statistical Pocketbook 1979/80.

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COUNTRY ECONOMIC MEMORANDUM

Distribution of Population by Age Group and Sex
(⁰⁰⁰)

Age group	1961			1971			1980		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	8,524	8,644	17,168	9,716	9,571	19,287	10,865	10,307	21,172
5-9	7,741	7,696	15,437	9,641	9,357	18,998	10,905	10,379	21,284
10-14	4,345	3,888	8,233	7,374	6,946	14,320	9,196	8,463	17,659
15-19	3,861	3,901	7,762	5,678	5,784	11,462	7,678	7,851	15,529
20-24	3,476	4,369	7,845	3,577	4,433	8,010	5,973	6,976	12,949
25-34	7,386	8,604	15,991	7,747	9,300	16,047	9,529	9,867	19,396
35-44	5,762	5,403	11,164	7,069	7,134	14,203	7,779	8,173	15,952
45-54	3,586	3,509	7,095	4,315	4,223	8,538	5,699	5,938	11,637
55-64	1,912	1,864	3,776	2,122	2,265	4,387	3,292	3,449	6,741
65+	1,182	1,245	2,427	1,415	1,557	2,971	2,281	2,705	4,986
Unknown	60	57	118	4	4	8	34	44	78
Total	47,838	49,181	97,019	58,658	60,575	119,233	73,231	74,152	147,383
----- Percentage distribution -----									
0-4	17.8	17.6	17.7	16.6	15.8	16.2	14.8	13.9	14.4
5-9	16.2	15.6	15.9	16.4	15.4	15.9	14.9	14.0	14.4
10-14	9.1	7.9	8.5	12.6	11.5	12.0	12.6	11.4	12.0
15-19	8.1	7.9	8.0	9.7	9.5	9.6	10.5	10.6	10.5
20-24	7.3	8.9	8.1	6.1	7.3	6.7	8.2	9.4	8.8
25-34	15.4	17.5	16.5	13.2	15.4	14.3	13.0	13.3	13.2
35-44	12.0	11.0	11.5	12.1	11.8	11.9	10.6	11.0	10.8
45-54	7.5	7.1	7.3	7.4	7.0	7.2	7.8	8.0	7.9
55-64	4.0	3.8	3.9	3.6	3.7	3.7	4.5	4.7	4.6
65+	2.5	2.5	2.5	2.4	2.6	2.5	3.1	3.6	3.4
Unknown	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: 1961, 1971 and 1980 censuses.

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COUNTRY ECONOMIC MEMORANDUM

Gross Domestic Product by Industrial Origin
at Current Market Prices, 1967-80
(Rp billion)

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
<u>Agriculture</u>	<u>457</u>	<u>1,069</u>	<u>1,339</u>	<u>1,575</u>	<u>1,646</u>	<u>1,837</u>	<u>2,710</u>	<u>3,497</u>	<u>4,003</u>	<u>4,812</u>	<u>5,906</u>	<u>6,706</u>	<u>8,984</u>	<u>11,252</u>
Farm food crops	301	726	823	962	961	1,071	1,573	2,096	2,555	3,044	3,660	3,991	4,892	6,365
Farm nonfood crops	46	133	199	214	196	226	323	386	358	481	762	801	1,162	1,340
Estate crops	19	47	69	83	107	118	152	191	184	213	326	404	590	673
Livestock products	33	53	89	103	124	135	173	223	303	346	305	462	717	987
Forestry	6	35	59	102	142	173	355	423	413	513	525	653	1,048	1,085
Fishery	54	75	101	112	116	114	134	179	191	215	328	393	575	803
Mining & quarrying	23	87	129	173	294	491	831	2,374	2,485	2,930	3,600	4,358	6,980	11,672
Manufacturing	62	179	251	312	307	448	650	890	1,124	1,453	1,817	2,185	2,614	3,846
Electricity, gas & water	3	9	13	15	18	20	30	52	70	98	106	118	149	225
Construction	14	45	75	100	128	174	262	406	590	813	1,023	1,242	1,790	2,524
Commerce, hotels, etc.	149	356	476	619	592	769	1,118	1,775	2,104	2,552	2,959	3,450	4,603	6,168
Transport & communications	19	57	77	96	162	182	257	442	521	663	821	980	1,300	1,706
Banking, etc.	4	12	22	33	45	53	83	113	151	207	236	396	655	1,047
Ownership of dwelling	17	41	53	66	85	103	143	194	258	319	542	671	914	1,185
Public administration & defense	41	116	136	183	214	290	405	585	864	1,074	1,394	1,685	2,200	3,145
Other services	59	125	147	169	181	197	264	380	473	547	607	668	835	996
<u>Gross Domestic Product</u>	<u>848</u>	<u>2,097</u>	<u>2,718</u>	<u>3,340</u>	<u>3,672</u>	<u>4,564</u>	<u>6,753</u>	<u>10,708</u>	<u>12,643</u>	<u>15,467</u>	<u>19,011</u>	<u>22,458</u>	<u>31,023</u>	<u>43,765</u>

Note: Totals do not add due to rounding.

Source: BPS.

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COUNTRY ECONOMIC MEMORANDUM

Percentage Distribution of GDP at Current Market Prices, 1971-80
(%)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
<u>Economic Sectors</u>										
Agriculture, forestry, fishery	44.8	40.3	40.1	32.7	31.7	31.1	31.1	29.9	29.0	25.7
Mining	8.0	10.8	12.3	22.2	19.6	18.9	18.9	19.4	22.5	26.7
Manufacturing	8.4	9.8	9.6	8.3	8.9	9.4	9.6	9.7	8.4	8.8
Electricity, gas & water	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5
Construction	3.5	3.8	3.9	3.8	4.7	5.3	5.4	5.5	5.8	5.7
Transport & communications	4.4	4.0	3.8	4.1	4.1	4.3	4.3	4.4	4.2	3.9
Other services	30.4	30.9	29.8	28.4	30.4	30.4	30.1	30.6	29.6	28.7
<u>Gross Domestic Product</u>	<u>100.0</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Expenditure Categories</u>										
Private consumption	77.1	74.5	70.9	67.8	69.2	67.7	65.6	66.3	59.7	57.2
Government consumption	9.3	9.1	10.6	7.8	9.9	10.3	10.9	11.9	12.0	12.7
Gross domestic investment	15.8	18.8	17.9	16.8	20.3	20.7	20.1	20.8	21.6	21.7
Exports, net	-2.2	-2.4	0.6	7.6	0.6	1.3	3.4	1.0	6.7	8.4
<u>Gross Domestic Product</u>	<u>100.0</u>									

Source: Based on BPS data (Tables 2.1 and 2.5).

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COUNTRY ECONOMIC MEMORANDUM

Gross Domestic Product by Industrial Origin
at Constant 1973 Market Prices, 1971-80
(Rp billion)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
<u>Agriculture</u>	<u>2,441</u>	<u>2,479</u>	<u>2,710</u>	<u>2,811</u>	<u>2,811</u>	<u>2,944</u>	<u>2,981</u>	<u>3,135</u>	<u>3,260</u>	<u>3,438</u>
Farm food crops	1,436	1,415	1,573	1,681	1,696	1,756	1,734	1,836	1,909	2,094
Farm nonfood crops	302	329	323	307	312	325	392	388	400	429
Estate crops	154	160	152	174	183	188	201	210	231	230
Livestock products	160	169	173	186	202	216	177	184	208	211
Forestry	258	276	355	325	274	310	318	352	338	292
Fishery	131	130	134	138	144	150	159	166	174	182
Mining & quarrying	551	674	831	859	828	952	1,070	1,049	1,047	1,035
Manufacturing	490	564	650	755	848	930	1,058	1,176	1,295	1,569
Electricity, gas & water	25	26	30	37	41	46	49	57	69	78
Construction	171	222	262	320	365	385	464	529	563	628
Commerce, hotels, etc.	924	1,028	1,118	1,224	1,294	1,351	1,438	1,530	1,620	1,790
Transport & communications	210	229	257	288	303	343	428	490	541	596
Banking, etc.	64	75	83	88	102	117	151	165	180	205
Ownership of dwelling	93	121	143	174	198	209	252	288	306	332
Public administration & defense	326	393	405	443	564	596	689	768	805	972
Other services	250	256	264	270	277	284	280	297	304	311
<u>Gross Domestic Product</u>	<u>5,545</u>	<u>6,067</u>	<u>6,753</u>	<u>7,269</u>	<u>7,631</u>	<u>8,156</u>	<u>8,871</u>	<u>9,483</u>	<u>9,990</u>	<u>10,954</u>

Note: Totals do not add due to rounding.

Source: BPS.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Percentage Distribution of GDP at Constant 1973 Market Prices, 1971-80
(%)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
<u>Economic Sectors</u>										
Agriculture, forestry, fishery	44.0	40.8	40.1	38.7	36.8	36.1	33.6	33.1	32.6	31.4
Mining	9.9	11.1	12.3	11.8	10.9	11.7	12.1	11.1	10.5	9.5
Manufacturing	8.8	9.3	9.6	10.4	11.1	11.4	11.9	12.4	13.0	14.3
Electricity, gas & water	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7
Construction	3.0	3.7	3.9	4.4	4.8	4.7	5.2	5.6	5.6	5.7
Transport & communications	3.8	3.8	3.8	4.0	4.0	4.2	4.8	5.2	5.4	5.4
Other services	30.1	30.9	29.8	30.2	31.9	31.3	31.8	32.0	32.2	33.0
<u>Gross Domestic Product</u>	<u>100.0</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Expenditure Categories</u>										
Private consumption	72.1	70.5	70.9	75.0	74.4	74.0	72.5	73.5	75.8	75.7
Government consumption	9.4	9.2	10.6	8.8	11.0	11.0	11.8	12.2	13.5	15.2
Gross domestic investment	15.6	17.0	17.9	19.8	21.6	21.4	22.9	24.6	24.4	26.2
Exports, net	2.9	3.3	0.6	-3.6	-7.0	-6.4	-7.2	-10.3	-13.7	-17.1
<u>Gross Domestic Product</u>	<u>100.0</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Based on BPS data (Tables 2.3 and 2.6).

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Expenditures on GDP at Current Market Prices, 1971-80
(Rp billion)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Private consumption /a	2,833	3,402	4,791	7,259	8,744	10,464	12,458	14,900	18,505	25,045
Government consumption	341	414	716	1,147	1,254	1,591	2,077	2,659	3,733	5,565
Gross domestic investment	580	857	1,208	1,797	2,572	3,205	3,826	4,671	6,704	9,485
Export of goods & nonfactor services	529	754	1,354	3,105	2,851	3,430	4,466	4,788	9,461	13,353
Less import of goods & nonfactor services	611	863	1,316	2,294	2,778	3,222	3,817	4,559	7,381	9,684
<u>Gross Domestic Product</u>	<u>3,672</u>	<u>4,564</u>	<u>6,753</u>	<u>10,700</u>	<u>12,643</u>	<u>15,467</u>	<u>19,011</u>	<u>22,458</u>	<u>31,023</u>	<u>43,765</u>
Net factor income abroad	-67	-159	-245	-507	-556	-432	-678	-852	-1,489	-2,169
GNP	3,605	4,405	6,508	10,201	12,087	15,035	18,332	21,606	29,534	41,596
GDS	498	748	1,246	2,608	2,645	3,412	4,475	4,900	8,784	13,154
GNS	431	589	739	2,101	2,089	2,980	3,797	4,048	7,295	10,985
GDI/GDP (%)	15.8	18.8	17.9	16.7	20.3	20.7	20.1	20.8	21.6	21.7
GDS/GDP (%)	13.6	16.4	18.5	24.2	20.9	22.1	23.5	21.8	28.3	30.1
GNS/GNP (%)	12.0	13.4	16.4	20.5	17.3	19.8	20.7	18.7	24.7	26.4

/a Residual.

Note: Totals do not add due to rounding.

Source: BPS.

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COUNTRY ECONOMIC MEMORANDUM

Expenditures on GDP at Constant 1973 Market Prices, 1971-80
(Rp billion)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Private consumption /a	3,998	4,276	4,791	5,454	5,679	6,032	6,433	6,967	7,581	8,289
Government consumption	518	561	716	641	836	897	1,044	1,156	1,345	1,669
Gross domestic investment	867	1,032	1,208	1,440	1,650	1,749	2,028	2,333	2,436	2,868
Export of goods & nonfactor services	891	1,123	1,354	1,403	1,267	1,425	1,744	1,776	1,759	1,685
Less import of goods & nonfactor services	730	925	1,316	1,669	1,801	1,946	2,378	2,749	3,131	3,558
<u>Gross Domestic Product</u>	<u>5,545</u>	<u>6,067</u>	<u>6,753</u>	<u>7,269</u>	<u>7,631</u>	<u>8,156</u>	<u>8,871</u>	<u>9,483</u>	<u>9,990</u>	<u>10,954</u>
Terms of trade effect	-260	-312	0	863	584	641	1,030	1,108	2,249	3,224
GDY	5,285	5,755	6,753	8,132	8,215	8,797	9,901	10,591	12,239	14,178
GNP	5,465	5,896	6,508	6,900	7,271	7,790	8,448	8,970	9,358	10,157
GNY	5,205	5,584	6,508	7,763	7,855	8,431	9,478	10,078	11,607	13,381
GDS	769	918	1,246	2,037	1,700	1,868	2,424	2,468	3,313	3,423
GNS	689	747	1,000	1,668	1,340	1,501	2,001	1,955	2,681	2,626
GDI/GDP (%)	15.6	17.0	17.9	19.8	21.6	21.4	22.9	24.6	24.4	26.2
GDS/GDY (%)	14.6	16.0	18.5	25.0	20.7	21.2	24.4	23.3	27.1	24.1
GNS/GNY (%)	13.2	13.4	15.4	21.5	17.1	17.8	21.1	19.4	23.1	19.6

/a Residual.

Note: Totals do not add due to rounding.

Source: BPS.

ANNEX III
Table 2.6

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Estimate of the Terms of Trade Effects, 1972-80
(Rp billion)

	1972	1973	1974	1975	1976	1977	1978	1979	1980
Exports in current prices	754	1,354	3,105	2,851	3,430	4,466	4,788	9,214	13,353
Exports in 1973 prices	1,123	1,354	1,403	1,267	1,425	1,744	1,776	1,934	1,685
Exports price index	67	100	221	225	241	256	270	476	792
Imports in current prices	862	1,316	2,294	2,778	3,222	3,817	4,559	7,082	9,684
Imports in 1973 prices	925	1,316	1,669	1,801	1,946	2,378	2,749	3,040	3,558
Imports price index	93	100	137	154	166	161	166	233	272
Exports (imports capacity)	811	1,354	2,266	1,851	2,068	2,774	2,884	4,008	4,909
Terms of trade effect	-312	0	863	584	643	1,030	1,108	2,249	3,224
Net factor income from abroad in current prices	-159	-246	-507	-556	-432	-679	-852	-1,324	-2,169
Net factor income from abroad in 1973 prices	-171	-246	-369	-360	-367	-423	-514	-568	-797
Net foreign inflows (1973 prices)	-285	-208	228	-310	-247	-27	-379	245	-242
Net foreign inflows (Current prices)	-267	-208	304	-483	-224	-30	-623	591	1,500

Note: Totals do not add due to rounding.

Source: Based on BPS data (Tables 2.5 and 2.6).

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Average Growth Rates and Selected Economic Indicators, 1960-80

	1960-70 (% p.a.)	1970-75 (% p.a.)	1975-80 (% p.a.)
Agriculture	2.7	4.4	4.1
Industry	5.2	13.4	9.7
Mining	-	-	4.6
Manufacturing	-	-	13.1
Electricity, gas, water	-	-	13.7
Construction	-	-	11.5
Services	4.8	9.7	9.0
GDP	3.9	8.4	7.5
Private consumption	4.1	8.9	7.9
Government consumption	0.9	11.0	14.8
Total consumption	-	-	8.9
GDI	4.6	18.3	11.7
Exports	3.6	11.3	5.9
Imports	3.2	25.0	14.6
GDY	-	-	11.5
Factor payments	-	-	17.2
GNP	3.9	7.6	6.9
GNY	-	-	11.2
GDS	-	-	15.0
GNS	-	-	14.4

Economic indicators

	Constant prices		Current prices	
	1960-70	1970-75	1975-80 /a	1975-80 /a
ICOR /b	2.2	2.2	3.1	
GDI/GDP	-	-	24.1%	21.2%
Average domestic savings rate	6.3	19.4	24.0%	25.1%
Marginal domestic savings rate	-	-	29.0%	34.4%
Average national savings rate	-	-	21.4%	22.1%
Marginal national savings rate	-	-	23.3%	30.0%
Imports/GDP	-	-	29.0%	21.8%
Exports/GDP	-	-	17.7%	27.0%
Resource balance/GDP	-	-	6.1%/c	5.2%
Import elasticity	0.8	3.0	1.95	1.01

/a Average values are based on the five years 1976 to 1980, and marginal values on changes between 1975 and 1980.

/b GDI 1975-79: GDP 1975-80.

/c (Exports [Imports capacity] - Imports) : GDP.

Source: Based on BPS data, Table 2.1-2.7.

INDONESIA
COUNTRY ECONOMIC MEMORANDUMBalance of Payments, 1973/74 - 1982/83
(US\$ million)

	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83
				Actual				/a	/a	/a
1. Net oil /b	641	2,638	3,138	3,710	4,352	3,785	6,308	9,345	8,699	7,949
2. Net LNG /b	-	-	-	-	93	225	667	1,256	1,400	1,404
3. Nonoil (net)	-1,397	-2,776	-3,992	-4,512	-5,135	-5,165	-4,777	-8,426	-12,868	-14,246
(a) Exports, f.o.b.	1,905	2,033	1,873	2,863	3,507	3,979	6,171	5,584	4,170	5,270
(b) Imports, c. & f.	-2,938	-4,341	-5,090	-6,167	-7,241	-7,543	-9,028	-11,790	-14,760	-16,920
(c) Service (nonfreight)	-364	-468	-755	-1,208	-1,401	-1,601	-1,920	-2,220	-2,278	-2,596
4. Current account (1+2+3)	-756	-138	-854	-802	-690	-1,155	2,198	2,175	-2,769	-4,893
5. SDRs	-	-	-	-	-	64	65	62	-	-
6. Official transfer & capital	643	660	1,995	1,823	2,106	2,101	2,503	2,529	2,904	3,976
(a) IGGI	556	513	945	1,596	1,694	1,625	2,050	2,251	1,916	2,998
(i) Program aid	281	180	74	147	157	94	239	118	50	46
(ii) Project aid	275	333	871	1,449	1,537	1,531	1,891	2,233	1,866	2,952
- ODA	(275)	(333)	(482)	(513)	(661)	(814)	(919)	(1,144)	(907)	(1,260)
- Non-ODA	(-)	(-)	(389)	(936)	(876)	(717)	(892)	(1,089)	(959)	(1,692)
(b) Non-IGGI	87	147	1	227	412	476	453	278	988	978
(c) Cash loan	-	-	1,049	-	-	-	-	-	-	-
7. Debt repayment (principal)	-81	-89	-77	-166	-761	-632	-692	-615	-809	-850
8. Miscellaneous capital	549	-131	-1,075	38	176	392	-1,315	-361	1,281	502
(a) Direct investment	331	538	454	287	285	271	217	140	167	276
(b) Trade credits	18	13	14	-32	-50	-	-	-	-	-
(c) Others	200	-682	-1,543	-217	-59	121	-1,532	-501	1,114	226
9. Total (4 through 8)	355	302	-11	893	831	770	2,759	3,790	607	-1,265
10. Errors & omissions	5	-311	-353	108	-180	-62	-1,069	-1,054	-1,443	-
11. Monetary movements	-360	9	364	-1,001	-651	-708	-1,690	-2,736	836	1,265

/a Estimate as of March 15, 1982.

Source: Bank Indonesia.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Non-oil Exports, 1971/72 - 1980/81

	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81 ^{/a}
Timber										
Value	170	275	720	615	527	885	943	1,130	2,125	1,583
Volume	8,840	12,701	15,704	12,434	11,335	15,770	15,651	16,050	16,012	11,280
Price	19	22	46	49	46	56	60	70	133	140
Rubber										
Value	215	211	483	425	381	577	608	774	1,101	1,077
Volume	809	826	902	842	846	892	873	920	1,015	954
Price	266	255	535	505	450	647	697	841	1,084	1,129
Palm Oil										
Value	45	42	89	184	142	147	202	221	257	178
Volume	212	245	279	303	417	415	438	413	440	376
Price	212	171	319	607	341	354	461	535	584	473
Coffee										
Value	54	83	79	92	112	330	626	508	715	588
Volume	72	111	96	105	142	143	179	231	238	232
Price	750	748	823	876	789	2,308	3,496	2,200	3,004	2,534
Tea										
Value	31	31	31	50	50	64	120	98	91	97
Volume	46	46	46	51	61	64	60	67	69	77
Price	674	674	674	980	820	996	2,007	1,469	1,319	1,260
Tobacco										
Value	20	32	46	36	40	41	59	58	60	69
Volume	19	27	35	26	23	21	27	27	24	31
Price	1,053	1,185	1,314	1,385	1,756	1,954	2,194	2,130	2,500	2,226
Pepper										
Value	21	21	31	22	25	55	62	66	46	51
Volume	24	24	25	14	17	33	31	38	24	32
Price	875	875	1,240	1,571	1,454	1,668	2,012	1,729	1,917	1,594
Palm Kernel										
Value	5	4	6	8	4	4	5	2	12	7
Volume	59	51	37	30	41	30	25	6	33	30
Price	85	78	162	267	98	140	218	333	364	233
Copra										
Value	8	6	3	-	-	-	-	-	13	-
Volume	67	61	21	-	-	-	-	-	27	-
Price	119	98	143	-	-	-	-	-	481	-
Copra Cake										
Value	12	14	19	22	29	36	33	34	52	46
Volume	236	303	224	236	363	375	301	323	354	390
Price	51	46	85	93	80	96	111	105	146	118
Tapioca										
Value	14	12	7	30	17	10	13	28	59	36
Volume	434	304	117	455	234	133	184	433	545	334
Price	32	39	60	66	73	75	68	65	108	108
Other Food Stuff										
Value	28	26	49	47	37	52	48	65	79	99
Animal & Product										
Value	23	42	90	92	105	146	179	212	255	224
Tin										
Value	64	70	98	166	158	181	253	324	388	454
Volume	20	21	22	24	22	27	25	26	27	30
Price	3,200	3,333	4,455	6,917	7,541	6,707	10,110	12,454	14,370	15,133
Copper										
Value	-	13	56	102	74	95	74	64	95	115
Volume	-	28	126	222	189	230	188	168	187	117
Price	-	464	444	459	392	413	395	382	508	650
Other Minerals										
Value	18	19	21	28	25	44	36	35	126	203
Miscellaneous										
Value	56	76	77	114	144	196	246	360	700	757
Total Value	784	977	1,905	2,033	1,873	2,863	3,507	3,979	6,171	5,584

/a Provisional actual.

Value: In millions of US\$
Volume: In thousands of tons
Price: US\$/ton

Source: Bank Indonesia.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Export Values by Country of Destination, 1971-81
(%)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981/a
Japan	44.6	50.7	53.2	53.5	44.1	41.7	40.2	39.2	46.1	49.3	47.6
ASEAN	17.7	9.7	11.7	8.6	10.3	8.9	10.6	12.7	14.3	12.6	12.2
Malaysia	2.5	1.7	1.0	1.0	0.9	0.3	0.2	0.2	0.4	0.3	0.3
Philippines	2.1	0.5	-	-	0.5	1.1	1.2	1.7	1.1	0.8	1.8
Singapore	13.0	7.5	10.6	7.5	8.9	7.5	9.2	10.7	12.6	11.3	10.0
Thailand	-	-	-	0.1	-	-	-	0.1	0.2	0.2	0.1
Other Asia	3.6	4.7	5.4	3.8	4.3	4.3	5.8	5.8	5.9	4.3	4.1
USA	15.6	14.9	14.5	21.3	26.3	28.7	27.8	25.4	20.3	19.6	18.2
Other America	0.5	4.2	2.1	6.0	8.3	7.6	5.3	6.9	3.0	4.5	8.6
EEC	13.6	11.9	8.8	4.9	5.6	7.2	8.5	7.5	7.6	6.4	4.4
France	0.6	0.6	0.5	0.3	0.2	0.4	0.6	0.5	0.5	0.5	0.2
West Germany	5.0	3.7	3.7	2.2	1.9	2.4	2.2	1.9	2.2	1.8	1.1
Netherlands	5.8	4.4	3.1	1.9	2.5	2.7	3.4	3.0	2.6	1.9	1.6
United Kingdom	1.0	1.3	1.0	0.3	0.4	0.5	0.6	0.5	0.6	0.7	0.5
Other EEC	1.2	1.9	0.5	0.1	0.6	1.2	1.7	1.6	1.7	1.5	0.9
Other Europe	2.3	2.7	2.4	1.4	0.7	1.0	1.0	1.2	1.1	1.0	1.7
Australia	2.0	0.8	1.7	0.3	0.3	0.4	0.5	0.9	1.2	1.5	2.1
Other Oceania	-	0.1	-	-	-	-	-	0.1	0.3	0.5	0.9
Africa	0.1	0.3	0.2	0.2	0.1	0.2	0.3	0.3	0.2	0.3	1.6
<u>Total</u>	<u>100.0</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

/a January-October 1981.

Source: Indikator Ekonomi (BPS).

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Import Values by Country of Origin, 1971-81
(%)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981/a
Japan	32.8	34.0	29.3	29.4	30.9	26.2	27.1	30.1	29.2	31.5	30.2
ASEAN	7.7	9.3	8.7	9.3	8.6	14.0	14.3	9.7	11.7	12.5	12.3
Malaysia	0.4	0.5	0.5	0.3	0.4	0.4	0.3	0.3	0.5	0.3	0.5
Philippines	0.2	0.3	0.5	0.3	0.3	0.3	0.3	1.1	0.7	0.8	2.2
Singapore	6.3	6.5	4.9	6.5	7.2	9.7	8.6	6.8	7.5	8.6	8.6
Thailand	0.8	2.0	2.8	2.2	0.7	3.6	5.1	1.5	3.0	2.6	1.0
Other Asia	11.7	11.8	17.3	16.5	14.3	12.8	16.9	17.0	18.7	19.6	15.5
USA	15.8	15.6	18.8	15.9	14.1	17.4	12.4	12.4	14.3	13.0	13.9
Other America	0.5	0.7	0.9	1.4	1.8	1.2	2.3	2.4	1.8	1.9	2.0
EEC	20.3	17.8	16.5	17.7	18.6	21.2	20.8	19.0	14.9	13.3	17.4
France	1.5	1.3	1.7	1.9	1.9	3.5	3.0	2.5	2.0	2.2	2.7
West Germany	9.5	7.5	7.2	8.2	7.6	8.6	7.8	8.9	6.4	6.3	7.1
Netherlands	4.6	4.3	3.3	2.7	2.8	3.0	4.2	2.2	1.7	1.1	1.7
United Kingdom	4.2	4.1	3.8	3.8	3.5	3.1	3.8	3.1	2.7	2.4	4.3
Other EEC	0.5	0.6	0.5	1.1	2.8	3.0	2.0	2.3	2.1	1.3	1.6
Other Europe	5.3	3.7	3.2	5.4	5.8	2.4	2.2	4.5	3.9	2.7	3.3
Australia	2.9	3.3	3.5	3.4	3.3	3.4	3.0	3.3	3.1	3.5	2.7
Other Oceania	0.1	0.3	0.2	0.4	0.3	0.4	0.5	0.6	0.6	0.6	0.8
Africa	2.9	3.5	1.6	0.6	2.3	1.0	0.5	1.0	1.8	1.2	1.9
<u>Total</u>	<u>100.0</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

/a January-October 1981.

Source: Indikator Ekonomi (BPS).

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Oil Balance of Payments 1976/77 - 1980/81
(In US\$ millions)

	1976/77	1977/78	1978/79	1979/80					1980/81				
				I	II	III	IV	Total	I	II	III	IV	Total
1. Exports, FOB	6,349.7	7,191.7	6,857.9	1,919.1	2,382.6	2,587.8	3,089.0	9,978.5	3,339.8	3,338.1	3,658.2	3,751.5	14,087.6
C.O.W.	2,880.5	2,776.2	2,628.2	627.5	801.5	857.0	1,044.2	3,330.2	1,081.6	1,258.5	1,172.0	1,331.8	4,843.9
Prod. sharing	1,561.8	1,750.8	1,755.2	556.3	579.2	474.2	601.0	2,210.7	736.7	661.5	812.2	839.1	3,049.5
In kind (COW + PS)	1,221.7	1,703.3	1,594.5	441.4	616.2	774.0	838.9	2,670.5	920.4	833.5	1,042.6	910.9	3,707.4
Pertamina	685.7	961.4	880.0	293.9	385.7	482.6	604.9	1,767.1	601.1	584.6	631.4	669.7	2,486.8
2. Imports	-1,948.0	-1,640.0	-1,829.4	-525.5	-532.8	-381.1	-389.0	-1,828.8	-723.1	-859.1	-588.9	-643.1	-2,814.2
C.O.W.	-111.0	-138.9	-111.9	-28.5	-35.6	-45.3	-37.2	-146.6	-52.3	-84.2	-44.3	-63.4	-244.2
Prod. sharing	-1,024.6	-720.3	0827.6	-262.3	-231.9	-103.7	-85.1	-683.0	-301.5	-232.6	-206.9	-297.0	-1,038.0
Pertamina	-812.4	-780.8	-889.9	-234.7	-265.3	232.1	-267.1	-999.2	-369.3	-542.3	-337.7	-282.7	-1,532.0
3. Services	-692.1	-1,200.0	-1,243.1	-323.3	-478.9	-511.9	-527.8	-1,841.9	-384.7	-471.4	-525.9	-547.0	-1,929.0
C.O.W.	-438.6	-497.5	-472.2	-114.6	-155.6	-157.0	-206.6	-633.8	-211.9	-223.9	-209.8	-262.4	-908.0
Prod. sharing	-92.4	-433.1	-433.3	-133.9	-179.9	-223.2	-270.2	-807.2	-108.2	-135.2	-149.6	-147.5	-540.5
Pertamina	-161.1	-269.4	-348.6	-74.8	-143.4	-131.7	-51.0	-400.9	-64.6	-112.3	-166.5	-137.1	-480.5
4. Current Account (1 + 2 + 3)	3,709.6	4,351.7	3,785.4	1,070.3	1,370.9	1,694.8	2,171.8	6,307.8	2,232.0	2,007.6	2,543.4	2,561.4	9,344.4
C.O.W.	2,330.9	2,139.8	2,044.1	484.4	610.3	654.7	828.3	2,577.7	817.4	950.4	917.9	1,006.0	3,691.7
Prod. sharing	444.8	597.4	505.3	160.1	167.4	147.3	217.8	692.6	327.0	293.7	455.7	394.6	1,471.6
In kind (COW + PS)	1,221.7	1,703.3	1,594.5	441.4	616.2	774.0	838.9	2,670.5	920.4	833.5	1,042.6	910.9	3,707.4
Pertamina	-287.8	-88.8	-358.5	-15.6	-23.0	118.8	286.8	367.0	167.2	-70.0	127.2	249.9	474.3
5. Miscellaneous Capital	-710.3	-198.4	10.5	-132.0	-252.6	-246.6	-273.0	-904.3	-105.4	-85.9	-257.9	-210.0	-659.2
Reimbursement LNG	69.3	15.4	-	-	5.2	-	-	5.2	-	-	-	-	-
Debt repayments	-485.8	-278.5	-220.8	-51.5	-39.6	-48.5	-29.6	-169.3	-48.3	-34.7	-44.9	-23.1	-151.0
Short-term	(-98.1)	(-12.0)	(-7.2)	(-2.0)	(-6.2)	(-0.6)	(-)	(-8.8)	(-1.8)	(-0.6)	(-0.3)	(-)	(-2.7)
MP/IT borrowing	(-145.4)	(-106.1)	(-92.0)	(-30.9)	(-7.9)	(-25.2)	(18.9)	(-82.9)	(-24.4)	(-16.1)	(-19.5)	(0.5)	(-60.5)
Special projects	(-34.8)	(-28.2)	(-32.1)	(-)	(-14.4)	(-)	(-)	(-14.4)	(-)	(-)	(-)	(-)	(-)
Crude debt repayments	(-207.5)	(-132.2)	(-89.5)	(-18.6)	(-11.1)	(-22.7)	(-11.6)	(-64.1)	(-22.1)	(-18.0)	(-25.1)	(22.6)	(87.8)
Project prefinancing	-59.8	-8.7	-13.6	-1.6	-1.4	-	-	-3.0	-	-	-	-	-
Oil export credit	-234.0	-73.4	244.9	-78.9	-216.8	-198.1	-243.4	-737.2	-57.1	-51.2	-213.0	-186.9	-503.2
Payments due	(4,177.5)	(5343.1)	(5,179.3)	(1,282.3)	(1,551.7)	(1,837.8)	(2,234.9)	(6,906.7)	(2,586.7)	(2,593.0)	(2,809.5)	(2,771.7)	(10,760.9)
Receivables	(-4,411.5)	(-5,269.7)	(-4,934.4)	(-1,361.2)	(-1,768.5)	(-2,035.5)	(-2,478.3)	(7,643.9)	(-2,643.8)	(-2,644.3)	(-3,022.5)	(-2,958.6)	(-11,269.2)
6. Total (4 + 5)	2,999.3	4,153.3	3,795.9	938.3	1,118.3	1,448.2	1,898.8	5,403.5	2,126.6	1,921.7	2,285.5	2,351.4	8,605.2
7. Errors and omissions	-50.3	15.0	39.2	-10.2	8.8	64.5	119.4	182.6	-10.9	-31.2	-16.0	-7.5	-65.6
8. Monetary movements	-2,949.0	-4,168.3	-3,835.1	-928.1	-1,127.1	-1,512.7	-2,018.2	-5,586.1	-2,115.7	-1,890.5	-2,269.5	2,343.9	8,619.6

Source: Bank Indonesia.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

LNG Balance of Payments 1977/78 - 1980/81
(In US\$ millions)

	1977/78	1978/79	1979/80					1980/81				
			I	II	III	IV	Total	I	II	III	IV	Total
1. Exports, FOB	161.7	516.2	208.9	300.9	327.3	508.2	1,345.3	462.3	568.0	530.8	549.4	2,110.5
a. C & F	188.9	604.3	244.0	340.5	367.4	559.1	1,511.0	510.4	625.9	585.6	598.5	2,320.4
- MBTU (million)	(71.2)	(216.3)	(78.8)	(90.6)	(90.3)	(113.4)	(373.1)	(96.6)	(114.5)	(108.2)	(105.0)	(424.3)
- M/T (million)	(1.4)	(4.1)	(1.5)	(1.8)	(1.8)	(2.2)	(7.3)	(1.9)	(2.2)	(2.1)	(2.0)	(8.2)
- Price (\$/MMBTU)	(2.63)	(2.79)	(3.09)	(3.76)	(4.07)	(4.93)	(4.05)	(5.28)	(5.46)	(5.41)	(5.70)	(5.47)
b. Freight	27.2	88.1	35.1	39.6	40.1	50.9	165.7	48.1	57.9	54.8	49.1	209.9
- \$/MMBTU	(0.42)	(0.43)	(0.44)	(0.44)	(0.44)	(0.45)	(0.45)	(0.50)	(0.51)	(0.51)	(0.47)	(0.49)
2. Imports, C&F	-17.0	-52.8	-20.3	-21.4	-24.8	-28.9	-95.4	-34.9	-35.2	-35.6	-30.6	-136.3
3. Services	-52.2	-238.8	-75.5	-119.1	-172.9	-215.2	-582.7	-105.2	-206.0	-171.9	-235.5	-718.6
Cost of recovery	-21.8	-222.8	-61.0	-94.5	-137.1	-135.6	-428.2	-4.0	-53.2	-55.4	-108.7	-221.3
Contractor's share	-30.4	-15.8	-14.3	-24.5	-35.6	-79.3	-153.7	-100.9	-152.5	-115.8	-126.4	-495.6
Other charges	-	-0.2	-0.2	-0.1	-0.2	-0.3	-0.8	-0.3	-0.3	-0.7	-0.4	-1.7
4. Current account (1 + 2 + 3)	92.5	224.6	113.1	160.4	129.6	264.1	667.2	322.2	326.8	323.3	283.3	1,255.6
5. Miscellaneous Capital	-79.0	-146.6	-86.5	-75.7	-63.4	-109.2	-334.8	-27.4	-20.8	-61.3	-40.1	-149.6
Debt repayments (JILCO ex-escrow account)	-29.7	-96.7	-40.9	-40.7	-36.7	-22.1	-140.4	-62.1	-63.0	-61.4	-51.5	-238.0
LNG export credit (net transfers to escrow and special account)	-49.3	-49.9	-45.6	-35.0	-26.7	-87.1	-194.4	34.7	42.2	-0.1	11.4	88.4
6. Total (4 + 5)	13.5	78.0	26.6	84.7	66.2	154.9	332.4	294.8	306.5	262.0	242.7	1,106.0
7. Errors and omissions	13.9	1.5	-1.5	-10.1	-6.8	-5.1	-23.5	-31.6	-44.2	-5.1	-21.7	-102.6
8. Monetary movements	-27.4	-79.5	-25.1	-74.6	-59.4	-149.8	-308.9	-263.2	-262.3	-256.9	-221.0	-1,003.4
BUN	-11.9	-28.4	-24.5	-34.6	-57.9	-146.1	-263.1	-256.6	-256.0	-250.0	-216.6	-979.2
Pertamina	-0.8	-2.5	-0.6	-0.9	-1.5	-3.7	-6.7	-6.6	-6.3	-6.9	-4.4	-24.2
Pertamina (straight to B.I. as debt repayments)	-14.7	-48.6	-	-39.1	-	-	-39.1	-	-	-	-	-

Source: Bank Indonesia.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

External Public Debt Outstanding Including Undisbursed as of December 31, 1980
With Major Reported Additions Through December 31, 1981

Debt Repayable in Foreign Currency and Goods
(US\$'000)

Type of creditor Creditor country	Debt outstanding			Major reported additions, Jan. 1 to Dec. 31, 1981
	Disbursed	Undisbursed	Total	
<u>Suppliers' Credits</u>				
Australia	4,390	112	4,502	-
France	43	31,927	31,970	-
Germany, Fed. Rep. of	946	94,071	95,017	-
Japan	1,313,923	63,700	1,377,623	737,499
Korea, Rep. of	71,610	15,790	87,400	25,627
Netherlands	17,379	-	17,379	-
Switzerland	925	-	925	-
Tanzania	758	-	758	-
United States	615	-	615	-
Yugoslavia	64,189	13,461	77,650	-
<u>Total Suppliers' Credits</u>	<u>1,474,778</u>	<u>219,061</u>	<u>1,693,839</u>	<u>763,126</u>
<u>Financial Institutions</u>				
Austria	-	-	-	32,394
Belgium	99,995	42,277	142,272	28,550
Canada	350,000	-	350,000	-
France	320,116	329,411	649,527	490,660
Germany, Fed. Rep. of	221,101	449,856	670,957	86,519
Hong Kong	28,716	414,996	443,712	300,000
Italy	6,350	3	6,353	-
Japan	298,648	162,736	461,384	3,719
Netherlands	267,735	5,739	273,474	46,983
Norway	67,806	17,489	85,295	-
Singapore	261,576	254	261,830	-
Sweden	45,681	9,953	55,634	-
Switzerland	6,280	138,524	144,804	-
United Kingdom	148,447	29,194	177,641	83,079
United States	1,495,455	325,174	1,820,629	430,000
<u>Total Financial Institutions</u>	<u>3,617,906</u>	<u>1,925,606</u>	<u>5,543,512</u>	<u>1,501,904</u>
<u>Bonds</u>				
Germany, Fed. Rep. of	51,047	-	51,047	-
Japan	49,260	-	49,260	49,260
Kuwait	24,512	-	24,512	-
Netherlands	31,698	-	31,698	-
Switzerland	42,589	-	42,589	-
<u>Total Bonds</u>	<u>199,106</u>	<u>-</u>	<u>199,106</u>	<u>49,260</u>
<u>Nationalization</u>				
Netherlands	194,224	-	194,224	-
<u>Total Nationalization</u>	<u>194,224</u>	<u>-</u>	<u>194,224</u>	<u>-</u>

Type of creditor Creditor country	Debt outstanding			Major reported additions, Jan. 1 to Dec. 31, 1981
	Disbursed	Undisbursed	Total	
<u>Multilateral Loans</u>				
Asian Development Bank	228,050	951,629	1,179,679	337,800
IBRD	1,039,686	2,028,894	3,068,580	837,000
IDA	565,794	374,546	940,340	-
Islamic Development Bank	-	27,090	27,090	-
<u>Total Multilateral Loans</u>	<u>1,833,530</u>	<u>3,382,159</u>	<u>5,215,689</u>	<u>1,174,800</u>
<u>Bilateral Loans</u>				
Abu Dhabi	2,071	13,457	15,528	-
Australia	9,838	853	10,691	-
Austria	709	123	832	-
Belgium	69,058	23,792	92,850	11,103
Bulgaria	1,824	-	1,824	-
Canada	176,106	139,380	315,486	148,637
China	66,581	-	66,581	-
Czechoslovakia	60,817	-	60,817	-
Denmark	59,339	8,961	68,300	63,167
Egypt, Arab Rep. of	3,025	-	3,025	-
France	241,297	219,827	461,124	26,572
German Dem. Rep.	50,017	-	50,017	-
Germany, Fed. Rep. of	699,001	542,289	1,241,290	96,061
Hungary	15,171	-	15,171	-
India	9,047	45	9,092	65,572
Iran	135,935	907	136,842	-
Italy	63,694	-	63,694	-
Japan	2,620,285	1,429,736	4,050,021	387,662
Kuwait	1,861	49,005	50,866	37,965
Netherlands	356,830	284,937	641,767	2,254
New Zealand	3,290	460	3,750	-
Pakistan	7,353	-	7,353	-
Poland	85,423	-	85,423	-
Romania	12,249	-	12,249	-
Saudi Arabia	58,269	64,170	122,439	-
Spain	-	-	-	365
United Kingdom	14,227	-	14,227	-
United States	2,021,375	618,158	2,639,533	11,950
USSR	678,548	1,182	679,730	-
Yugoslavia	117,456	4,320	121,776	-
Multiple lenders	-	151,500	151,500	-
<u>Total Bilateral Loans</u>	<u>7,640,696</u>	<u>3,553,102</u>	<u>11,193,798</u>	<u>851,308</u>
<u>Total External Public Debt</u>	<u>14,960,240</u>	<u>9,079,928</u>	<u>24,040,168</u>	<u>4,340,398</u>

Notes: (1) Only debts with an original or extended maturity of over one year are included in this table.

(2) Major reported additions to December 31, 1981 converted to US dollars at end-1980 exchange rates. New commitments at average 1981 exchange rates were \$4,097 million.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

TABLE 2 - INDONESIA

SERVICE PAYMENTS, COMMITMENTS, DISBURSEMENTS AND OUTSTANDING AMOUNTS OF EXTERNAL PUBLIC DEBT

PROJECTIONS BASED ON DEBT OUTSTANDING INCLUDING UNDISBURSED AS OF DEC. 31, 1980

INCLUDES ONLY DEBT COMMITTED JAN. 1, 1900 - DEC. 31, 1981
DEBT REPAYABLE IN FOREIGN CURRENCY AND GOODS
(IN THOUSANDS OF U.S. DOLLARS)

YEAR	DEBT OUTSTANDING AT BEGINNING OF PERIOD		TRANSACTIONS DURING PERIOD					OTHER CHANGES	
	DISBURSED ONLY	INCLUDING UNDISBURSED	COMMITMENTS	DISBURSEMENTS	SERVICE PAYMENTS			CANCEL-LATIONS	ADJUST-MENT *
					PRINCIPAL	INTEREST	TOTAL		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1976	7,994,025	11,696,601	3,133,314	2,332,201	433,687	326,928	760,615	9,897	147,842
1977	10,001,650	14,534,173	1,720,488	1,956,138	820,999	440,695	1,261,694	14,780	714,358
1978	11,658,326	16,133,240	3,288,390	2,205,372	1,548,319	513,797	2,062,116	41,003	1,113,731
1979	13,107,270	18,946,039	4,313,626	1,865,411	1,328,656	770,911	2,099,567	149,808	-447,103
1980	13,234,368	21,334,098	3,752,506	2,612,368	952,713	823,725	1,776,438	123,273	29,539
1981	14,960,240	24,040,157							
* * * * * THE FOLLOWING FIGURES ARE PROJECTED * * * * *									
1981	14,960,240	24,040,157	4,340,398	3,684,735	1,189,909	1,014,075	2,203,984	-	-72,345
1982	17,382,698	27,118,301	-	3,072,328	1,361,122	1,189,985	2,551,107	-	-3
1983	19,093,892	25,757,176	-	2,419,453	1,555,872	1,266,358	2,822,230	-	5
1984	19,957,471	24,201,309	-	1,776,767	1,750,098	1,286,156	3,036,254	-	7
1985	19,984,151	22,451,218	-	1,173,797	1,897,010	1,255,367	3,152,377	-	3
1986	19,260,933	20,554,211	-	656,985	1,769,682	1,167,964	2,937,646	-	13
1987	18,148,246	18,784,542	-	355,505	1,819,537	1,055,558	2,875,095	-	-2
1988	16,684,213	16,965,003	-	167,926	1,771,244	918,513	2,689,757	-	5
1989	15,080,900	15,193,764	-	70,653	1,612,513	776,922	2,389,435	-	9
1990	13,539,048	13,581,260	-	27,593	1,364,829	652,999	2,017,828	-	20
1991	12,201,832	12,216,451	-	7,085	1,248,048	559,752	1,807,800	-	7
1992	10,960,876	10,968,410	-	1,422	1,011,484	495,665	1,507,149	-	8
1993	9,950,822	9,956,934	-	6,112	971,447	444,091	1,415,538	-	18
1994	8,985,505	8,985,505	-	-	942,757	395,145	1,337,902	-	7
1995	8,042,755	8,042,755	-	-	847,025	349,318	1,196,343	-	21
1996	7,195,751	7,195,751	-	-	838,548	308,791	1,147,339	-	4
1997	6,357,207	6,357,207	-	-	811,381	268,242	1,079,623	-	6
1998	5,545,832	5,545,832	-	-	786,302	229,020	1,015,322	-	-4
1999	4,759,526	4,759,526	-	-	752,028	191,104	943,132	-	26
2000	4,007,524	4,007,524	-	-	576,412	127,965	704,377	-	-12

* THIS COLUMN SHOWS THE AMOUNT OF ARITHMETIC IMBALANCE IN THE AMOUNT OUTSTANDING INCLUDING UNDISBURSED FROM ONE YEAR TO THE NEXT. THE MOST COMMON CAUSES OF IMBALANCES ARE CHANGES IN EXCHANGE RATES AND TRANSFER OF DEBTS FROM ONE CATEGORY TO ANOTHER IN THE TABLE.

Source: IBRD External Debt Reporting System based on data provided by Bank Indonesia.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

External Debt By Country and Type of Creditor as of December 31, 1980
(US\$ million)

	Bilateral/ multilateral		Other /a		Total	
	Dis- bursed only	Incl. undis- bursed	Dis- bursed only	Incl. undis- bursed	Dis- bursed only	Incl. undis- bursed
Australia	10	11	4	4	14	15
Austria	1	1	-	-	1	1
Belgium	69	93	100	142	169	235
Canada	176	315	350	350	526	665
Denmark	59	68	-	-	59	68
France	241	461	320	682	561	1,143
Germany	699	1,241	273	817	972	2,058
Italy	64	64	6	6	70	70
Japan	2,620	4,050	1,662	1,888	4,282	5,938
Netherlands	357	642	511	517	868	1,159
New Zealand	3	4	-	-	3	4
Switzerland /b	-	-	50	188	50	188
United Kingdom	14	14	148	178	163	192
United States	2,021	2,640	1,496	1,821	3,517	4,461
<u>Total Bilateral IGGI</u>	<u>6,335</u>	<u>9,604</u>	<u>4,921</u>	<u>6,594</u>	<u>11,255</u>	<u>16,197</u>
Asian Development Bank	228	1,180	-	-	228	1,180
IBRD/IDA	1,606	4,009	-	-	1,606	4,009
<u>Total Multilateral IGGI</u>	<u>1,834</u>	<u>5,189</u>	<u>-</u>	<u>-</u>	<u>1,834</u>	<u>5,189</u>
<u>Total IGGI</u>	<u>8,169</u>	<u>14,792</u>	<u>4,921</u>	<u>6,594</u>	<u>13,090</u>	<u>21,386</u>
Non-IGGI	1,305	1,617	565	1,037	1,870	2,654
<u>Total</u>	<u>9,474</u>	<u>16,409</u>	<u>5,486</u>	<u>7,631</u>	<u>14,960</u>	<u>24,040</u>

/a Suppliers, financial institutions, bonds, nationalization debt.

/b Bilateral debts amounting to about \$15 million were cancelled in 1978.

Note: Data in this table refer to public sector and medium-term debt with an original maturity of one year or more. Figures rounded to nearest million. Totals may not add due to rounding.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

INDONESIACOUNTRY ECONOMIC MEMORANDUMExternal Public Debt as of December 31, 1980,
by Major Currencies and Countries

	<u>Amount (\$ billion)</u>		<u>Share (%)</u>	
	<u>Disbursed</u>	<u>Total</u>	<u>Disbursed</u>	<u>Total</u>
<u>Currency</u>				
US dollar	6.61	8.68	44	36
Yen	2.93	4.48	19	19
DM	1.17	2.24	8	9
DFL	0.86	1.15	6	5
Ruble	0.68	0.68	4	3
Fr. franc	0.56	1.14	4	5
Other	0.86	1.39	6	6
Multiple	1.29	4.28	9	17
<u>Total</u>	<u>14.96</u>	<u>24.04</u>	<u>100</u>	<u>100</u>
<u>Country</u>				
Japan	4.28	5.94	29	25
USA	3.52	4.46	23	19
West Germany	0.97	2.06	6	8
Netherlands	0.87	1.16	6	5
France	0.56	1.14	4	5
USSR	0.68	0.68	5	3
Other countries	2.25	3.38	15	14
Multilateral organizations	1.83	5.22	12	21
<u>Total</u>	<u>14.96</u>	<u>24.04</u>	<u>100</u>	<u>100</u>

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Loan Commitments by Country, 1974-80
(US\$ million)

	<u>Bilateral/multilateral /a</u>							<u>Other /b</u>							<u>Total</u>						
	1974	1975	1976	1977	1978	1979	1980	1974	1975	1976	1977	1978	1979	1980	1974	1975	1976	1977	1978	1979	1980
Australia	-	-	-	-	6	3	2	6	-	-	6	-	-	-	6	-	-	6	6	3	2
Austria	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Belgium	8	9	8	9	10	11	3	-	126	-	-	-	15	31	8	135	8	9	10	26	35
Canada	-	14	223	5	61	11	-	-	-	-	-	350	-	-	-	14	223	5	411	11	-
Denmark	-	-	57	-	-	10	-	-	-	-	-	-	-	-	-	57	-	-	-	10	-
France	35	16	-	76	77	105	-	35	331	88	50	132	221	50	71	348	88	127	209	326	50
Germany	51	126	13	76	86	240	186	-	3	470	-	76	395	177	51	129	483	76	162	635	363
Italy	-	-	-	-	-	-	-	9	-	-	-	-	-	-	9	-	-	-	-	-	-
Japan	376	173	132	419	187	640	504	1,181	213	335	79	213	290	188	1,557	386	466	498	398	930	693
Netherlands	47	-	89	41	-	110	113	38	310	1	-	9	37	6	85	310	90	41	9	147	119
New Zealand	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
Switzerland	-	-	-	-	-	-	-	-	-	-	-	-	153	45	-	-	-	-	-	153	45
United Kingdom	-	-	-	-	-	-	-	-	143	50	-	42	47	4	-	143	50	-	42	47	4
United States	59	143	430	65	349	208	290	216	905	249	250	725	457	542	275	1,048	679	315	1,074	665	832
<u>Total Bilateral</u>																					
IGGI	577	482	953	691	776	1,336	1,099	1,485	2,031	1,192	385	1,545	1,617	1,044	2,062	2,513	2,145	1,076	2,321	2,953	2,143
Asian Development Bank	78	78	109	136	199	235	285	-	-	-	-	-	-	-	78	78	109	136	199	235	285
IBRD/IDA	195	311	564	406	551	815	734	-	-	-	-	-	-	-	195	311	564	406	551	815	734
<u>Total Multilateral</u>																					
IGGI	273	389	673	542	750	1,050	1,019	-	-	-	-	-	-	-	273	389	673	542	750	1,050	1,019
<u>Total IGGI</u>	850	871	1,626	1,233	1,525	2,386	2,117	1,485	2,031	1,192	385	1,545	1,617	1,044	2,335	2,902	2,817	1,617	3,071	4,003	3,161
Non-IGGI	-	200	71	103	25	46	152	-	175	244	-	193	265	440	-	375	317	103	217	310	592
<u>Total</u>	850	1,071	1,697	1,336	1,550	2,432	2,269	1,485	2,206	1,436	385	1,738	1,882	1,484	2,335	3,277	3,133	1,720	3,288	4,313	3,753

/a Specific loan and/or project agreements signed. Amounts may, therefore, differ from donor's pledge or budget allocation, general agreements, frame agreements, exchange of notes and other forms of bilateral commitment preceding specific commitments. Grants are excluded.

/b Suppliers, financial institutions, bonds.

Note: Data in this table refer to public sector medium- and long-term loans with a maturity of one year or more. Figures rounded to nearest million. Totals may not add due to rounding.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

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IGGI and Non-IGGI Disbursements and Net Resource Transfers, 1974-80
(US\$ million)

	<u>Bilateral/multilateral /a</u>							<u>Others /b</u>							<u>Total</u>							
	1974	1975	1976	1977	1978	1979	1980	1974	1975	1976	1977	1978	1979	1980	1974	1975	1976	1977	1978	1979	1980	
<u>Gross Disbursements</u>																						
<u>Bilateral IGGI</u>	399	394	615	478	621	424	706	633	1,526	1,315	988	1,167	912	1,181	1,033	1,919	1,929	1,466	1,788	1,336	1,886	
<u>Multilateral IGGI</u>	88	184	291	268	216	279	431	-	-	-	-	-	-	-	88	184	291	268	216	279	431	
<u>Total IGGI</u>	<u>487</u>	<u>578</u>	<u>906</u>	<u>746</u>	<u>837</u>	<u>703</u>	<u>1,137</u>	<u>633</u>	<u>1,526</u>	<u>1,315</u>	<u>988</u>	<u>1,167</u>	<u>912</u>	<u>1,181</u>	<u>1,120</u>	<u>2,103</u>	<u>2,221</u>	<u>1,734</u>	<u>2,004</u>	<u>1,615</u>	<u>2,318</u>	
<u>Non-IGGI</u>	-	-	14	121	98	37	23	-	23	97	101	103	214	272	-	24	111	222	201	250	294	
<u>Total Gross Disbursements</u>	<u>487</u>	<u>578</u>	<u>920</u>	<u>867</u>	<u>935</u>	<u>740</u>	<u>1,160</u>	<u>633</u>	<u>1,549</u>	<u>1,412</u>	<u>1,089</u>	<u>1,270</u>	<u>1,126</u>	<u>1,453</u>	<u>1,120</u>	<u>2,127</u>	<u>2,332</u>	<u>1,956</u>	<u>2,205</u>	<u>1,865</u>	<u>2,612</u>	
<u>Net Disbursements /c</u>																						
<u>Bilateral IGGI</u>	370	361	561	395	493	265	513	492	1,300	1,063	307	(138)	(62)	614	862	1,661	1,624	702	355	203	1,127	
<u>Multilateral IGGI</u>	88	184	290	266	208	252	393	-	-	-	-	-	-	-	88	184	290	266	208	252	393	
<u>Total IGGI</u>	<u>458</u>	<u>545</u>	<u>851</u>	<u>662</u>	<u>701</u>	<u>517</u>	<u>906</u>	<u>492</u>	<u>1,300</u>	<u>1,063</u>	<u>307</u>	<u>(138)</u>	<u>(62)</u>	<u>614</u>	<u>950</u>	<u>1,845</u>	<u>1,914</u>	<u>968</u>	<u>563</u>	<u>455</u>	<u>1,520</u>	
<u>Non-IGGI</u>	(42)	(31)	(17)	88	29	(33)	(57)	-	(35)	2	78	65	114	197	(41)	(66)	(15)	(167)	94	82	140	
<u>Total Net Disbursements</u>	<u>416</u>	<u>514</u>	<u>834</u>	<u>750</u>	<u>730</u>	<u>484</u>	<u>849</u>	<u>492</u>	<u>1,265</u>	<u>1,065</u>	<u>385</u>	<u>(73)</u>	<u>52</u>	<u>811</u>	<u>909</u>	<u>1,779</u>	<u>1,899</u>	<u>1,135</u>	<u>657</u>	<u>537</u>	<u>1,660</u>	
<u>Net Resource Transfers /d</u>																						
<u>Bilateral IGGI</u>	320	294	472	282	346	76	334	465	1,198	868	38	(407)	(510)	142	785	1,492	1,340	320	(61)	(434)	476	
<u>Multilateral IGGI</u>	86	180	282	230	144	167	286	-	-	-	-	-	-	-	86	180	282	230	144	167	286	
<u>Total IGGI</u>	<u>407</u>	<u>474</u>	<u>754</u>	<u>512</u>	<u>490</u>	<u>243</u>	<u>620</u>	<u>465</u>	<u>1,198</u>	<u>868</u>	<u>38</u>	<u>(407)</u>	<u>(510)</u>	<u>142</u>	<u>872</u>	<u>1,672</u>	<u>1,622</u>	<u>550</u>	<u>83</u>	<u>(267)</u>	<u>762</u>	
<u>Non-IGGI</u>	(43)	(32)	(21)	79	15	(49)	(74)	-	(36)	(30)	66	45	82	148	(43)	(68)	(50)	144	60	33	74	
<u>Total Net Resource Transfers</u>	<u>364</u>	<u>442</u>	<u>733</u>	<u>591</u>	<u>505</u>	<u>194</u>	<u>546</u>	<u>465</u>	<u>1,162</u>	<u>838</u>	<u>104</u>	<u>(362)</u>	<u>(428)</u>	<u>290</u>	<u>829</u>	<u>1,604</u>	<u>1,572</u>	<u>694</u>	<u>143</u>	<u>(234)</u>	<u>836</u>	

/a Excluding grants.

/b Suppliers, financial institutions, bonds.

/c Equals gross disbursements minus amortization.

/d Equals gross disbursements minus debt service.

Note: Data in this table refer to disbursements and resource transfers of public sector medium- and long-term debt with a maturity of one year or more. Figures rounded to nearest million. Totals may not add due to rounding.

Source: IBRD Debtor Reporting system based on data provided by Bank Indonesia.

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Summary External Debt Data, 1974-80 /a

	1974	1975	1976	1977	1978	1979	1980
External Debt Data (US\$ million)							
Disbursed and Outstanding Debt							
(DOD) /b	6,358	7,994	10,002	11,658	13,107	13,234	14,960
Bilateral/multilateral	4,619	5,008	5,913	7,075	8,390	8,436	9,474
Other /c	1,739	2,986	4,089	4,583	4,717	4,798	5,486
Total Debt Outstanding, Including							
Undisbursed (TDO) /b							
Bilateral/multilateral	6,268	7,121	8,828	10,588	12,749	14,296	16,409
Other /c	2,751	4,576	5,706	5,545	6,197	7,038	7,631
Commitments							
Bilateral/multilateral	2,335	3,277	3,133	1,720	3,288	4,313	3,753
Other /c	850	1,071	1,697	1,336	1,550	2,432	2,269
Other /c	1,485	2,206	1,436	385	1,738	1,882	1,484
Gross Disbursements							
Bilateral/multilateral	1,120	2,127	2,332	1,956	2,205	1,865	2,612
Other /c	487	578	920	867	935	740	1,160
Other /c	633	1,549	1,412	1,089	1,270	1,126	1,453
Net Disbursements							
Bilateral/multilateral	909	1,779	1,899	1,135	657	537	1,660
Other /c	416	514	834	750	730	484	849
Other /c	492	1,265	1,065	385	(73)	52	811
Net Resource Transfers							
Bilateral/multilateral	829	1,604	1,572	694	143	(234)	836
Other /c	364	442	733	591	505	194	546
Other /c	465	1,162	838	104	(362)	(428)	290
Public Debt Service							
Amortization	292	523	761	1,262	2,062	2,100	1,776
Interest	212	348	434	821	1,548	1,329	953
Interest	80	175	327	441	514	771	823
Public Debt Service							
Bilateral/multilateral	292	523	761	1,262	2,062	2,100	1,776
Other /c	124	136	187	277	429	545	611
Other /c	168	388	574	985	1,632	1,554	1,163
Disbursement Indicators (%)							
Undisbursed Debt/TDO /b	30	32	31	28	31	38	38
Bilateral/multilateral	26	30	33	33	34	41	42
Other /c	37	35	28	17	24	32	28
Gross Disbursements/Commitments	48	65	74	114	67	43	70
Bilateral/multilateral	57	54	54	65	60	30	51
Other /c	43	70	98	283	73	60	98
Gross Disbursements/Undisbursed Debt and Commitments /d	30	36	34	31	28	18	22
Bilateral/multilateral	23	21	24	20	18	11	14
Other /c	39	48	47	54	47	33	39
Net Disbursements/Gross Disbursements	81	84	81	58	30	29	64
Bilateral/multilateral	85	89	91	87	78	65	73
Other /c	78	82	75	35	-	5	56
Net Resource Transfers/Gross Disbursement	74	75	67	35	6	-	32
Bilateral/multilateral	75	76	80	68	54	26	47
Other /c	73	75	59	10	-	-	20

/a Data in this table refer to public sector medium- and long-term loans. Loans with a maturity of less than one year and grants are not included.

/b End of year.

/c Suppliers, financial institutions, bonds, nationalization debt.

/d Gross disbursements as % of undisbursed debt (TDO-DOD) at beginning of year plus commitments during the year.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

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Selected Debt Indicators, 1973-80 /a

	1973	1974	1975	1976	1977	1978	1979	1980
Ratio DOD/exports	1.40	0.80	0.87	0.87	0.92	1.03	0.75	0.59
Ratio DOD/GDP	0.32	0.25	0.26	0.27	0.26	0.26	0.27	0.21
Ratio TDO/exports	1.73	1.01	1.24	1.27	1.34	1.42	1.08	0.96
Ratio TDO/GDP	0.41	0.35	0.38	0.39	0.36	0.37	0.43	0.34
Debt service/exports (%)	6.89	4.42	7.18	8.26	11.62	18.17	12.00	7.98
Debt service/GDP (%)	1.27	1.13	1.71	2.04	2.80	4.05	4.23	2.54
Debt service/Government revenues (%)	8.83	6.89	9.87	10.98	14.81	23.87	16.28	10.86
Interest on DOD/average DOD /a (%)	1.07	1.38	2.44	3.63	4.07	4.15	5.85	5.84
Total debt service/average DOD /b (%)	4.39	5.03	7.29	8.46	11.65	16.65	15.94	12.60
Amortization/average TDO /a (%)	2.64	2.70	3.36	3.33	5.35	8.83	6.60	4.20
Total debt service/gross disbursements (%)	19	26	25	33	65	94	113	68
Gross disbursements/imports (incl. NFS) (%)	30	17	28	25	18	19	13	14
Net disbursements/imports (incl. NFS) (%)	26	14	23	20	11	6	4	9
Net resource transfers/imports (incl. NFS) (%)	24	13	21	17	6	1	-	4
DOD = Disbursed and Outstanding Debt TDO = Total Debt Outstanding, incl. undisbursed								
In US\$ Billion								
GDP	16.30	25.90	30.50	37.30	45.10	50.93/d	49.64	70.02
Exports /c	3.01	6.60	7.28	9.21	10.86	11.35	17.50	22.25
Imports + net NFS /c	3.59	6.51	7.70	9.30	10.69	11.49	14.04	18.64
Government revenues /c	2.35	4.24	5.30	6.93	8.52	8.64/e	12.90	16.36

/a All ratios involving exports and imports treat trade flows relating to oil on a gross basis. Values appearing in the 1980 report have been recalculated.

/b Average of debt outstanding at beginning and end of year.

/c GOI fiscal year.

/d Converted at average 1978 exchange rate of US\$1 = RP 441.

/e Converted at average 1978/79 exchange rate of US\$1 = Rp 494.

Source: Debt data from Table 4.7; GDP from Table 2.1; Exports and Imports from Table 3.1; Government revenues from Table 5.1.

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COUNTRY ECONOMIC MEMORANDUM

Net Resource Transfers, 1975

	Commit- ments	Gross disburse- ments	Amortiza- tion	Net disburse- ments	Interest	Net resource transfers
1. Concessional						
ADB	-	17.7	-	17.7	0.6	17.1
IDA	-	106.9	-	106.9	1.7	105.2
Subtotal	-	124.6	-	124.6	2.3	122.3
Austria	-	0.2	-	0.2	-	0.2
Belgium	8.9	-	0.1	(0.1)	0.5	(0.6)
Canada	14.2	22.1	-	22.1	-	22.1
Denmark	-	3.6	-	3.6	-	3.6
France	16.4	17.5	2.4	15.1	2.2	12.9
Germany, Fed. Rep.	50.8	31.7	6.1	25.6	7.5	18.1
Italy	-	-	1.9	(1.9)	0.4	(2.3)
Japan	173.0	190.4	8.5	181.9	29.3	152.6
Netherlands	-	22.1	1.8	20.3	3.6	16.7
New Zealand	0.9	0.7	-	0.7	-	0.7
Switzerland	-	-	-	-	-	-
United Kingdom	0.2	8.9	0.1	8.8	0.1	8.7
United States	111.6	81.0	5.9	75.1	20.1	55.0
Subtotal	375.9	378.3	26.8	351.5	63.7	287.8
Total IGGI	375.9	502.9	26.8	476.1	66.0	410.1
Non-IGGI	-	-	30.5	(30.5)	1.2	(31.7)
Total	375.9	502.9	57.3	445.6	67.2	378.4
2. Nonconcessional						
ADB	78.3	2.5	-	2.5	0.2	2.3
IBRD	310.5	56.8	-	56.8	1.6	55.2
Subtotal	388.8	59.3	-	59.3	1.8	57.5
Australia	-	-	4.0	(4.0)	2.7	(6.7)
Belgium	126.3	8.8	0.4	8.4	2.7	5.7
Canada	-	-	-	-	-	-
Denmark	-	-	-	-	-	-
France	331.4	54.7	17.8	36.9	3.1	33.8
Germany, Fed. Rep.	77.9	-	2.3	(2.3)	0.6	(2.9)
Italy	-	-	-	-	-	-
Japan	212.7	493.5	108.3	385.2	23.3	361.9
Netherlands	310.4	27.5	19.4	8.1	21.9	(13.8)
Switzerland	-	-	-	-	-	-
United Kingdom	142.5	3.3	39.2	(35.9)	6.0	(41.9)
United States	936.4	953.3	40.3	913.0	44.7	868.3
Subtotal	2,137.5	1,541.1	231.6	1,309.5	105.0	1,204.5
Total IGGI	2,526.3	1,600.4	231.6	1,368.8	106.8	1,262.0
Non-IGGI	374.8	23.8	59.4	(35.6)	1.2	(36.8)
Total	2,901.1	1,624.2	291.0	1,333.2	108.0	1,225.2

/a Excludes grants.

/b Totals may not add due to rounding.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Net Resource Transfers, 1976

	Commitments	Gross disbursements	Amortization	Net disbursements	Interest	Net resource transfers
1. Concessional						
ADB	-	23.0	0.1	22.9	1.8	21.1
IDA	-	99.4	-	99.4	2.4	97.0
Subtotal	-	122.4	0.1	122.3	4.2	118.1
Austria	-	0.3	-	0.3	-	0.3
Belgium	8.4	16.9	0.1	16.8	0.5	16.3
Canada	35.5	-	-	-	-	-
Denmark	-	1.3	0.1	1.2	-	1.2
France	-	14.2	4.8	9.4	2.7	6.7
Germany, Fed. Rep.	12.7	29.4	10.4	19.0	8.9	10.1
Italy	-	-	2.9	(2.9)	0.3	(3.2)
Japan	131.6	176.3	18.3	158.0	33.5	124.5
Netherlands	89.0	15.8	2.6	13.2	3.8	9.4
New Zealand	0.7	0.5	-	0.5	-	0.5
Switzerland	-	-	-	-	-	-
United Kingdom	-	4.1	0.9	3.2	0.1	3.1
United States	155.0	106.5	9.0	97.5	26.4	71.1
Subtotal	432.9	365.3	49.1	316.2	76.2	240.0
Total IGGI	432.9	487.7	49.2	438.5	80.4	358.1
Non-IGGI	70.0	-	32.3	(32.3)	1.3	(33.6)
Total	502.9	487.7	81.5	406.2	81.7	324.5
2. Nonconcessional						
ADB	109.3	11.5	-	11.5	0.6	10.9
IBRD	563.5	157.2	0.9	156.3	3.5	152.8
Subtotal	672.8	168.7	0.9	167.8	4.1	163.7
Australia	-	-	0.4	(0.4)	0.1	(0.5)
Belgium	-	54.5	-	54.5	3.5	51.0
Canada	188.0	27.1	-	27.1	1.4	25.7
Denmark	56.7	-	-	-	-	-
France	87.8	132.8	9.4	123.4	11.0	112.4
Germany, Fed. Rep.	470.4	202.2	0.2	202.0	7.7	194.3
Italy	-	5.0	-	5.0	-	5.0
Japan	334.6	573.7	143.1	430.6	27.4	403.2
Netherlands	0.7	88.1	21.6	66.5	12.7	53.8
Switzerland	-	-	-	-	-	-
United Kingdom	49.7	74.7	4.9	69.8	3.3	66.5
United States	523.7	406.0	76.7	329.3	140.5	188.8
Subtotal	1,711.7	1,564.2	256.2	1,308.0	207.5	1,100.5
Total IGGI	2,384.5	1,732.9	257.1	1,475.8	211.6	1,264.2
Non-IGGI	245.9	111.6	95.1	16.5	33.6	(17.1)
Total	2,630.4	1,844.5	352.2	1,492.3	245.2	1,247.1

/a Excludes grants.

/b Totals may not add due to rounding.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Net Resource Transfers, 1977

	Commit- ments	Gross disburse- ments	Amortiza- tion	Net disburse- ments	Interest	Net resource transfers
1. Concessional						
ADB	-	12.3	0.1	12.2	1.6	10.6
IDA	-	49.0	-	49.0	3.1	45.9
Subtotal	-	<u>61.3</u>	<u>0.1</u>	<u>61.2</u>	<u>4.7</u>	<u>56.5</u>
Austria	-	-	-	-	-	-
Belgium	9.1	9.1	0.1	9.0	0.5	8.5
Canada	-	24.5	-	24.5	-	24.5
Denmark	-	-	0.3	(0.3)	-	(0.3)
France	26.1	8.4	4.4	4.0	2.7	1.3
Germany, Fed. Rep.	65.7	23.5	11.4	12.1	10.0	2.1
Italy	-	-	2.7	(2.7)	0.3	(3.0)
Japan	406.4	142.7	26.8	115.9	40.8	75.1
Netherlands	40.8	25.7	4.2	21.5	4.7	16.8
New Zealand	-	-	-	-	-	-
Switzerland	-	1.0	-	1.0	-	1.0
United Kingdom	-	4.5	1.1	3.4	0.1	3.3
United States	60.8	114.1	9.3	104.8	23.8	81.0
Subtotal	<u>608.8</u>	<u>353.7</u>	<u>60.3</u>	<u>293.4</u>	<u>82.6</u>	<u>210.8</u>
Total IGGI	<u>608.8</u>	<u>415.0</u>	<u>60.4</u>	<u>354.6</u>	<u>87.3</u>	<u>267.3</u>
Non-IGGI	95.4	27.3	32.6	(5.3)	3.9	(9.2)
Total	<u>704.2</u>	<u>442.3</u>	<u>93.0</u>	<u>349.3</u>	<u>91.2</u>	<u>258.1</u>
2. Nonconcessional						
ADB	136.0	15.8	0.1	15.7	2.2	13.5
IBRD	405.5	190.6	1.4	189.2	29.2	160.0
Subtotal	<u>541.5</u>	<u>206.4</u>	<u>1.5</u>	<u>204.9</u>	<u>31.4</u>	<u>173.5</u>
Australia	5.6	-	0.4	(0.4)	0.1	(0.5)
Belgium	-	44.1	-	44.1	6.7	37.4
Canada	4.7	44.3	2.0	42.3	4.0	38.3
Denmark	-	2.2	-	2.2	0.1	2.1
France	100.5	110.4	26.4	84.0	17.8	66.2
Germany, Fed. Rep.	10.0	137.8	97.6	40.2	24.3	15.9
Italy	-	1.6	-	1.6	0.2	1.4
Japan	92.0	334.8	197.6	137.2	45.0	92.2
Netherlands	-	118.7	25.2	93.5	28.7	64.8
Switzerland	-	-	-	-	-	-
United Kingdom	-	48.3	12.5	35.8	8.1	27.7
United States	254.3	269.9	341.8	(71.9)	164.9	(236.8)
Subtotal	<u>467.0</u>	<u>1,112.2</u>	<u>703.3</u>	<u>408.9</u>	<u>300.1</u>	<u>108.8</u>
Total IGGI	<u>1,008.5</u>	<u>1,318.6</u>	<u>704.8</u>	<u>613.8</u>	<u>331.5</u>	<u>282.3</u>
Non-IGGI	7.8	195.2	23.2	172.0	18.0	154.0
Total	<u>1,016.3</u>	<u>1,513.8</u>	<u>728.0</u>	<u>785.8</u>	<u>349.5</u>	<u>436.3</u>

/a Excludes grants.

/b Totals may not add due to rounding.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

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Net Resource Transfers, 1978

	Commit- ments	Gross disburse- ments	Amortiza- tion	Net disburse- ments	Interest	Net resource transfers
1. Concessional						
ADB	24.0	6.3	1.1	5.2	2.3	2.9
IDA	119.0	29.5	-	29.5	3.5	26.0
Subtotal	<u>143.0</u>	<u>35.8</u>	<u>1.1</u>	<u>34.7</u>	<u>5.8</u>	<u>28.9</u>
Austria	-	-	-	-	-	-
Belgium	10.3	-	0.1	(0.1)	0.7	(0.8)
Canada	60.7	5.3	-	5.3	-	5.3
Denmark	-	-	0.3	(0.3)	-	(0.3)
France	77.0	5.9	5.3	0.6	3.3	(2.7)
Germany, Fed. Rep.	82.1	19.5	14.7	4.8	10.9	(6.1)
Italy	-	-	2.8	(2.8)	0.3	(3.1)
Japan	186.7	222.5	45.3	177.2	58.1	119.1
Netherlands	-	28.7	4.4	24.3	6.1	18.2
New Zealand	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-
United Kingdom	-	0.5	4.1	(3.6)	0.2	(3.8)
United States	331.4	136.8	12.6	124.2	23.5	100.7
Subtotal	<u>748.3</u>	<u>419.3</u>	<u>89.7</u>	<u>329.6</u>	<u>103.2</u>	<u>226.4</u>
Total IGGI	<u>891.3</u>	<u>455.1</u>	<u>90.8</u>	<u>364.3</u>	<u>109.0</u>	<u>255.3</u>
Non-IGGI	24.6	28.6	45.9	(17.3)	3.5	(20.8)
Total	<u>915.9</u>	<u>483.7</u>	<u>136.7</u>	<u>347.0</u>	<u>112.5</u>	<u>234.5</u>
2. Nonconcessional						
ADB	174.7	12.3	0.5	11.8	4.6	7.2
IBRD	432.0	167.9	6.7	161.2	53.1	108.1
Subtotal	<u>606.7</u>	<u>180.2</u>	<u>7.2</u>	<u>173.0</u>	<u>57.7</u>	<u>115.3</u>
Australia	6.2	11.8	0.7	11.1	0.4	10.7
Belgium	-	10.0	9.0	1.0	10.6	(9.4)
Canada	350.0	35.0	1.8	33.2	7.2	26.0
Denmark	-	46.3	-	46.3	2.4	43.9
France	131.8	120.8	56.8	64.0	35.1	28.9
Germany, Fed. Rep.	80.1	232.2	114.6	117.6	19.9	97.7
Italy	-	0.3	-	0.3	0.2	0.1
Japan	211.6	242.3	272.5	(30.2)	71.5	(101.7)
Netherlands	8.5	40.6	23.5	17.1	27.7	(10.6)
Switzerland	-	-	-	-	-	-
United Kingdom	41.9	45.8	23.1	22.7	9.7	12.9
United States	742.5	583.8	841.1	(257.3)	128.5	(385.8)
Subtotal	<u>1,572.7</u>	<u>1,368.8</u>	<u>1,343.1</u>	<u>25.7</u>	<u>313.1</u>	<u>(287.4)</u>
Total IGGI	<u>2,179.4</u>	<u>1,549.0</u>	<u>1,350.3</u>	<u>198.7</u>	<u>370.8</u>	<u>(172.1)</u>
Non-IGGI	193.1	172.7	61.3	111.4	30.5	80.9
Total	<u>2,372.5</u>	<u>1,721.7</u>	<u>1,411.6</u>	<u>310.1</u>	<u>401.3</u>	<u>(91.2)</u>

/a Excludes grants.

/b Totals may not add due to rounding.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Net Resource Transfers, 1979 /a, /b

	Commitments	Gross disbursements	Amortization	Net disbursements	Interest	Net resource transfers
1. Concessional						
ADB	25.0	4.6	2.1	2.5	2.5	-
IDA	89.0	29.8	0.4	29.4	3.8	25.6
Subtotal	<u>114.0</u>	<u>34.4</u>	<u>2.5</u>	<u>31.9</u>	<u>6.3</u>	<u>25.6</u>
Austria	-	-	-	-	-	-
Belgium	11.0	-	0.3	(0.3)	0.7	(1.0)
Canada	10.8	9.3	-	9.3	-	9.3
Denmark	9.5	-	0.3	(0.3)	-	(0.3)
France	104.7	18.4	5.9	12.5	3.6	8.9
Germany, Fed. Rep.	231.0	23.9	19.2	4.7	13.2	(8.5)
Italy	-	-	2.9	(2.9)	0.3	(3.2)
Japan	573.2	157.0	54.3	102.7	58.8	43.9
Netherlands	109.7	23.9	6.6	17.3	1.6	9.7
New Zealand	-	-	-	-	-	-
Switzerland	-	-	-	-	-	-
United Kingdom	-	0.6	2.1	(1.5)	-	(1.5)
United States	198.9	160.5	18.0	142.5	52.5	90.0
Subtotal	<u>1,248.8</u>	<u>393.6</u>	<u>109.6</u>	<u>284.0</u>	<u>136.8</u>	<u>147.2</u>
Total IGGI	<u>1,362.8</u>	<u>428.0</u>	<u>112.1</u>	<u>315.9</u>	<u>143.1</u>	<u>172.8</u>
Non-IGGI	18.1	5.5	46.3	(40.8)	4.2	(45.0)
Total	<u>1,380.9</u>	<u>433.5</u>	<u>158.4</u>	<u>275.1</u>	<u>147.3</u>	<u>127.8</u>
2. Nonconcessional						
ADB	210.4	45.7	1.5	44.2	7.1	37.1
IBRD	726.0	198.9	23.3	175.6	71.7	103.9
Subtotal	<u>936.4</u>	<u>244.6</u>	<u>24.8</u>	<u>219.8</u>	<u>78.8</u>	<u>141.0</u>
Australia	3.4	0.3	1.8	(1.5)	0.9	(2.4)
Belgium	15.2	4.3	24.5	(20.2)	14.2	(34.4)
Canada	-	10.7	6.2	4.5	13.3	(8.8)
Denmark	-	1.7	-	1.7	3.7	4.0
France	221.1	46.8	97.7	(51.1)	28.1	(79.0)
Germany, Fed. Rep.	404.1	64.0	145.6	(81.6)	34.0	(115.6)
Italy	-	0.1	-	0.1	0.2	(0.1)
Japan	357.2	103.7	226.3	(122.6)	162.9	(285.5)
Netherlands	37.4	97.9	63.9	34.0	42.7	(8.7)
Switzerland	153.4	-	-	-	-	-
United Kingdom	46.7	30.1	38.8	(8.1)	14.4	(22.5)
United States	465.7	576.0	418.6	157.4	185.5	(28.1)
Subtotal	<u>1,704.3</u>	<u>942.3</u>	<u>1,023.4</u>	<u>(81.1)</u>	<u>500.0</u>	<u>(581.1)</u>
Total IGGI	<u>2,640.7</u>	<u>1,186.9</u>	<u>1,048.2</u>	<u>138.7</u>	<u>578.8</u>	<u>(440.1)</u>
Non-IGGI	292.0	245.1	122.0	123.1	44.9	78.2
Total	<u>2,932.7</u>	<u>1,432.0</u>	<u>1,170.2</u>	<u>261.8</u>	<u>623.7</u>	<u>(361.9)</u>

/a Excludes grants.

/b Totals may not add due to rounding.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Net Resource Transfers, 1980 /a, /b

	Commit- ments	Gross disburse- ments	Amortiza- tion	Net disburse- ments	Interest	Net resource transfers
1. Concessional						
ADB	-	6.1	2.9	3.2	2.4	0.8
IDA	162.0	41.7	1.3	40.4	4.0	36.4
Subtotal	<u>162.0</u>	<u>47.8</u>	<u>4.2</u>	<u>43.6</u>	<u>6.4</u>	<u>37.2</u>
Austria	-	-	-	-	-	-
Belgium	3.4	-	0.8	(0.8)	0.7	(1.5)
Canada	-	1.5	-	1.5	-	1.5
Denmark	-	-	-	-	-	-
France	-	33.4	6.4	27.0	4.8	22.2
Germany, Fed. Rep.	112.2	28.0	21.7	6.3	12.8	(6.5)
Italy	-	-	2.8	(2.8)	0.3	(3.1)
Japan	504.5	367.7	60.8	306.9	61.6	245.3
Netherlands	112.6	74.8	7.6	67.2	7.4	59.8
New Zealand	-	-	0.1	(0.1)	-	(0.1)
Switzerland	-	-	-	-	-	-
United Kingdom	-	-	1.4	(1.4)	0.2	(1.6)
United States	192.4	155.9	22.3	133.6	38.6	95.0
Subtotal	<u>925.2</u>	<u>661.2</u>	<u>124.3</u>	<u>536.9</u>	<u>126.5</u>	<u>410.4</u>
Total IGGI	<u>1,087.2</u>	<u>709.0</u>	<u>128.5</u>	<u>580.5</u>	<u>132.9</u>	<u>447.6</u>
Non-IGGI	-	22.7	58.1	(35.4)	3.4	(38.8)
Total	<u>1,087.2</u>	<u>731.7</u>	<u>186.6</u>	<u>545.1</u>	<u>136.3</u>	<u>408.8</u>
2. Nonconcessional						
ADB	284.6	52.3	3.4	48.9	11.6	37.3
IBRD	572.0	331.3	30.6	300.7	88.9	211.8
Subtotal	<u>856.6</u>	<u>383.6</u>	<u>34.0</u>	<u>349.6</u>	<u>100.5</u>	<u>249.1</u>
Australia	2.2	4.9	1.5	3.4	0.6	2.8
Austria	0.1	-	-	-	-	-
Belgium	31.3	7.6	14.3	(6.7)	12.0	(18.7)
Canada	-	353.1	12.2	340.9	37.4	303.5
Denmark	-	5.7	6.1	(0.4)	5.5	(5.9)
France	50.2	74.8	62.9	11.9	32.9	(21.0)
Germany, Fed. Rep.	250.8	71.7	68.5	3.2	43.1	(39.9)
Italy	-	-	-	-	0.2	(0.2)
Japan	188.3	253.0	207.4	45.6	130.5	(84.9)
Netherlands	6.0	0.4	57.4	(57.0)	45.3	(102.3)
Switzerland	44.8	51.4	-	51.4	0.2	51.2
United Kingdom	4.3	30.6	40.3	(9.7)	11.7	(21.4)
United States	639.5	371.8	164.5	207.3	205.5	1.8
Subtotal	<u>1,217.6</u>	<u>1,225.0</u>	<u>635.0</u>	<u>590.0</u>	<u>524.8</u>	<u>65.2</u>
Total IGGI	<u>2,074.2</u>	<u>1,608.6</u>	<u>669.0</u>	<u>939.6</u>	<u>625.3</u>	<u>314.3</u>
Non-IGGI	591.1	272.1	97.1	175.0	62.1	112.9
Total	<u>2,665.3</u>	<u>1,880.7</u>	<u>766.1</u>	<u>1,114.6</u>	<u>687.4</u>	<u>427.2</u>

/a Excludes grants.

/b Totals may not add due to rounding.

Source: IBRD Debtor Reporting System based on data provided by Bank Indonesia.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Central Government Budget Summary, 1972/73 - 1982/83
(Rp billion)

	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83
	----- Actual -----					----- Budget -----					
1. Domestic revenues	585.1	977.1	1,759.2	2,200.8	2,877.0	3,508.2	4,266.1	6,696.8	10,227.0	12,274.4	13,756.0
2. Routine expenditures /a	444.3	704.1	1,000.5	1,246.8	1,610.3	2,120.5	2,743.7	4,061.8	5,800.0	7,501.1	7,001.5
3. Government saving (1-2)	<u>140.8</u>	<u>273.0</u>	<u>758.7</u>	<u>954.0</u>	<u>1,266.7</u>	<u>1,387.7</u>	<u>1,522.4</u>	<u>2,635.0</u>	<u>4,427.0</u>	<u>4,773.3</u>	<u>6,755.0</u>
4. Development expenditures	290.7	473.7	966.4	1,425.2	2,043.5	2,157.6	2,555.6	4,014.2	5,916.1	6,399.2	8,605.8
5. Balance (3-4)	<u>-149.9</u>	<u>-200.7</u>	<u>-207.7</u>	<u>-471.2</u>	<u>-776.8</u>	<u>-769.9</u>	<u>-1,033.2</u>	<u>-1,379.2</u>	<u>-1,489.1</u>	<u>-1,625.9</u>	<u>-1,850.8</u>
Financed by:											
6. Counterpart funds /b	87.2	93.6	37.6	20.5	10.2	35.8	48.2	64.8	64.1	64.8	25.0
7. Project aid	62.3	114.1	195.9	471.4	773.6	737.6	987.3	1,316.3	1,429.7	1,561.1	1,825.8
8. Change in balances (- = increase)	0.4	-7.0	-25.8	-20.7	-7.0	-3.5	-2.3	-1.9	-4.8	-	-

/a Includes debt service payments.

/b Program aid.

Source: Ministry of Finance.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Central Government Receipts, 1972/73 - 1982/83
(Rp billion)

	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83
	----- Actual -----										
	----- Budget -----										
<u>Taxes on Income</u>	<u>301.1</u>	<u>511.1</u>	<u>1,234.5</u>	<u>1,558.3</u>	<u>2,029.2</u>	<u>2,515.9</u>	<u>2,996.3</u>	<u>5,129.3</u>	<u>8,230.3</u>	<u>10,038.2</u>	<u>11,113.0</u>
Income tax	25.9	33.3	43.4	65.3	87.4	103.0	122.2	148.1	164.2	207.1	256.0
Corporate tax	30.4	49.3	100.0	131.3	132.1	176.5	226.5	297.1	447.6	558.4	823.0
Corporate tax on oil	197.9	346.9	973.3/a	1,205.2	1,593.4	1,946.5	2,308.7	4,259.6	7,019.6	8,575.2	9,122.0
Withholding tax	31.8	56.5	78.4	97.0	147.0	202.3	232.5	291.3	433.5	512.6	680.0
IPEDA	15.1	19.5	29.0	35.8	42.6	53.3	63.1	71.4	87.2	87.6	109.0
Other	-	5.2	10.4	23.7	26.7	34.3	43.3	61.8	78.2	97.3	123.0
<u>Taxes on Domestic Consumption</u>	<u>125.9</u>	<u>168.0</u>	<u>161.0</u>	<u>234.4</u>	<u>322.1</u>	<u>376.2</u>	<u>491.4</u>	<u>537.2</u>	<u>732.9</u>	<u>874.5</u>	<u>1,104.0</u>
Sales tax	36.2	55.6	86.3	122.4	164.6	183.8	221.1	192.2	265.6	293.7	442.0
Excises	46.8	62.4	76.2	98.5	131.7	180.4	252.9	326.4	437.9	553.0	618.0
Other oil revenues	31.6	37.8	-16.0	-1.3	16.6	-/b	-/b	-/b	-/b	-/b	-/b
Miscellaneous levies	11.3	12.2	15.4	14.8	9.2	12.0	17.4	18.6	29.4	27.8	44.0
<u>Taxes on International Trade</u>	<u>141.4</u>	<u>253.6</u>	<u>300.7</u>	<u>309.5</u>	<u>421.5</u>	<u>482.7</u>	<u>587.0</u>	<u>843.0</u>	<u>948.1</u>	<u>1,142.4</u>	<u>1,147.0</u>
Import duties	76.8	132.4	160.9	175.1	256.0	286.9	295.3	316.7	448.0	538.9	678.0
Sales tax on imports	29.9	51.5	69.1	73.4	102.0	115.5	125.5	137.2	195.1	222.4	299.0
Export tax	34.7	69.7	70.7	61.0	63.5	79.3	166.2	389.1	305.0	381.1	170.0
<u>Nontax Receipt</u>	<u>16.7</u>	<u>44.4</u>	<u>62.1</u>	<u>98.6</u>	<u>104.2</u>	<u>133.4</u>	<u>191.4</u>	<u>187.3</u>	<u>315.7</u>	<u>219.3</u>	<u>392.0</u>
Domestic Revenue	585.1	977.1	1,759.2	2,200.8	2,877.0	3,508.2	4,266.1	6,696.8	10,227.0	12,274.4	13,765.0
<u>Development Funds</u>	<u>149.5</u>	<u>207.7</u>	<u>233.5</u>	<u>491.9</u>	<u>783.8</u>	<u>773.4</u>	<u>1,035.5</u>	<u>1,381.1</u>	<u>1,493.8</u>	<u>1,625.9</u>	<u>1,851.0</u>
Counterpart funds /c	87.2	93.6	37.6	20.5	10.2	35.8	48.2	64.8	64.1	64.8	
Project aid /d	62.3	114.1	195.9	471.4	773.6	737.6	987.3	1,316.3	1,429.7	1,561.1	
<u>Total Revenues</u>	<u>734.6</u>	<u>1,184.8</u>	<u>1,992.7</u>	<u>2,692.7</u>	<u>3,660.8</u>	<u>4,281.6</u>	<u>5,301.6</u>	<u>8,077.9</u>	<u>11,720.9</u>	<u>13,900.3</u>	<u>15,607.0</u>

/a Excludes underpayment of revenues, estimated at about Rp 340 billion, due to the Government by Pertamina.

/b Oil subsidies shown as Government expenditures (see Table 5.3).

/c Program aid.

/d Includes commercial bank and suppliers credits for development programs/projects.

Source: Ministry of Finance.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Central Government Expenditures, 1972/73-1982/83
(Rp billion)

	1972/73	1973/74	1974/75	1975/76	1976/77 Actual	1977/78	1978/79	1979/80	1980/81	1981/82 Budget	1982/83
<u>Personnel Expenditures</u>	197.4	258.9	408.0	565.0	639.4	880.8	1,001.6	1,419.9	2,023.3	2,412.3	2,491.8
Wages and salaries	125.6	166.5	292.8	386.4	425.8	661.1	760.3	1,053.9	1,482.9	1,742.3	1,782.0
Rice allowance	32.2	50.7	60.2	116.5	124.4	125.6	132.8	179.9	252.0	289.3	294.4
Food allowance	13.3	16.2	26.5	33.1	49.7	50.9	51.2	109.9	193.2	248.5	267.7
Other	19.4	18.2	17.9	17.5	26.2	28.4	33.6	47.1	61.2	81.5	93.4
External	6.9	7.3	10.6	11.5	13.5	14.8	23.7	29.1	34.0	50.6	54.3
<u>Material Expenditures</u>	92.1	109.1	167.0	292.3	325.2	356.5	419.5	569.0	670.6	994.3	1,067.7
Domestic	82.5	99.5	155.2	280.1	315.8	346.3	398.4	539.6	637.8	950.4	1,021.1
External	9.6	9.6	11.8	12.2	9.4	10.0	21.1	29.4	32.8	43.9	46.6
<u>Subsidies to Regions</u>	94.6	113.1	206.9	256.6	311.0	469.9	522.3	669.9	976.1	1,209.4	1,315.4
West Irian	10.6	8.2	13.2	13.4	18.6	18.7	22.1	25.0	33.9	42.0	43.0
Other regions	84.0	104.9	193.7	243.2	292.4	451.2	500.2	644.9	942.2	1,167.4	1,272.4
<u>Debt Service Payments</u>	49.4	73.7	69.2	67.9	180.3	227.6	534.5	684.1	784.8	963.7	976.2
Internal	5.3	11.1	5.2	2.8	11.3	6.9	8.8	36.5	30.8	30.0	30.0
External	44.1	62.6	64.0	65.1	169.0	220.7	525.7	647.6	754.0	933.7	946.2
<u>Other Expenditures</u>	10.8	149.3	149.4	65.0	154.4	185.9	265.8	718.9	1,345.1	1,921.4	1,150.4
Food subsidy	-	-	144.0	50.0	39.1	-	43.5	124.9	281.7	309.7	188.0
Oil subsidy	-	-	-	-	34.5	65.1	197.0	534.9	1,020.0	1,511.1	924.0
Others	10.8	149.3	5.4	15.0	80.8	120.8/a	25.3	59.1/b	43.4/c	100.6/d	38.0
<u>Routine Expenditures</u>	444.3	704.1	1,000.5	1,246.8	1,610.3	2,120.5	2,743.7	4,061.8	5,800.0	7,501.1	7,001.5
<u>Development Expenditures /e</u>	290.7	473.7	966.4	1,425.2	2,043.5	2,157.6	2,556.6	4,014.2	5,916.1	6,399.2	8,605.8
<u>Total Expenditures</u>	735.0	1,117.8	1,966.9	2,672.0	3,653.8	4,278.1	5,299.3	8,076.0	11,716.1	13,900.3	15,607.3

/a Includes debt service transfer to Pertamina (Rp 86.4 billion).

/b Includes Pertamina subsidy (Rp 48.1 billion).

/c Includes general election (Rp 16.5 billion).

/d Includes general election (Rp 81.0 billion).

/e For details, see Tables 5.4 and 5.5.

Source: Ministry of Finance.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Development Expenditures, 1972/73 - 1980/81
(Rp billion)

	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82
	----- Actual -----									/c
<u>General /a</u>										
Departments	126.8	171.4	226.2	403.5	568.5	744.5	851.0	1,480.3	2,533.2	1,372.4
Subsidies to villages	7.1	5.7	11.4	14.4	19.8	23.2	24.0	31.0	50.7	35.0
Subsidies to kabupatens	16.3	19.2	42.7	55.8	62.1	69.1	70.9	87.1	119.4	69.8
Irian Jaya	1.6	3.3	4.2	6.0	5.1	5.5	5.9	-	n.a.	n.a.
Subsidies on commercial import of fertilizer	-	33.5	224.7	133.5	105.4	31.8	82.6	125.0	283.7	160.7
Investment through the banking system	36.4	57.1	98.0	125.7	226.7	166.9	128.5	252.8	476.5	153.7
Primary schools	-	16.4	19.7	48.2	57.7	85.0	111.8	155.8	249.9	166.4
Others /b	4.4	12.4	67.0	83.5	122.3	165.3	143.7	393.7	519.3	276.4
Subtotal	<u>192.6</u>	<u>319.0</u>	<u>693.9</u>	<u>870.6</u>	<u>1,116.6</u>	<u>1,291.3</u>	<u>1,418.4</u>	<u>2,525.7</u>	<u>4,232.5</u>	<u>2,234.4</u>
Subsidies to provinces	20.7	20.7	47.6	47.4	59.7	75.4	86.8	100.8	166.7	106.2
IPEDA	15.1	19.9	29.0	35.8	42.6	52.5	63.1	71.4	87.2	45.8
Total (excl. project aid)	<u>228.4</u>	<u>359.6</u>	<u>770.5</u>	<u>953.8</u>	<u>1,269.9</u>	<u>1,419.2</u>	<u>1,568.3</u>	<u>2,697.9</u>	<u>4,486.4</u>	<u>2,386.4</u>
Project aid	62.3	114.1	195.9	471.4	773.6	737.6	987.3	1,316.3	1,429.7	732.9
Total (incl. project aid)	<u>290.7</u>	<u>473.7</u>	<u>966.4</u>	<u>1,425.2</u>	<u>2,043.5</u>	<u>2,156.8</u>	<u>2,555.6</u>	<u>4,014.2</u>	<u>5,916.1</u>	<u>3,119.3</u>

/a Excluding project aid.

/b Including INPRES.

/c First semester.

Source: Ministry of Finance.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Development Expenditures by Sector, 1974/75 - 1982/83
(Rp billion)

Sector	1974/75		1975/76		Actual 1976/77		1977/78		1978/79		Total Repelita II		Actual 1979/80		1980/81		Budget 1981/82		Budget 1982/83	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Agriculture & irrigation	299	31.0	270	19.0	364	17.8	380	17.6	450	17.6	1,763	19.3	509	12.7	929	15.7	942	14.7	1,253	14.5
(of which fertilizer subsidy)	(225)	(23.3)	(134)	(9.4)	(105)	(5.1)	(32)	(1.5)	(83)	(3.2)	(609)	(6.7)	(125)	(3.2)	(268)	(4.5)	(314)	(5.0)		
Industry & mining	70	7.3	120	8.4	201	9.8	139	6.4	205	8.0	734	8.0	403	10.0	501	5.5	522	8.2	1,304	15.2
Electric power	78	8.1	123	8.6	224	11.0	223	10.3	272	10.6	920	10.1	330	8.2	421	7.1	492	7.7		
Transportation & tourism	125	12.9	326	22.9	408	20.0	355	16.5	413	16.2	1,627	17.8	465	11.6	780	13.2	810	12.7	1,098	12.8
Manpower and transmigration	3	0.3	10	0.7	27	1.3	61	2.8	95	3.7	196	2.1	162	4.0	325	5.5	436	6.8	606	7.0
Regional development	138	14.3	165	11.6	190	9.3	251	11.6	275	10.8	1,019	11.1	336	8.4	482	8.1	613	9.6	741	8.6
Education	51	5.3	114	8.0	136	6.7	211	9.8	251	9.8	763	8.3	362	9.0	575	9.7	787	12.3	1,302	15.1
Health	22	2.3	38	2.7	45	2.2	71	3.3	79	3.1	255	2.8	142	3.5	218	3.7	259	4.0	322	3.7
Housing & water supply	6	0.6	14	1.0	27	1.3	90	4.2	56	2.2	192	2.1	117	2.9	191	3.2	156	2.4	281	3.3
General public services /a	52	5.4	74	5.2	110	5.4	123	5.7	224	8.8	583	6.4	473	11.8	700	11.8	738	11.5	870	10.1
Government capital participation	105	10.9	132	9.3	234	11.5	190	8.8	162	6.3	823	9.0	465	11.6	389	6.6	201	3.1	265	3.1
Others /b	18	1.9	39	2.7	79	3.9	65	3.0	73	2.9	274	3.0	250	6.3	405	6.8	445	7.0	564	6.6
Total Development Expenditures	966	100.0	1,425	100.0	2,044	100.0	2,157	100.0	2,556	100.0	9,148	100.0	4,014	100.0	5,916	100.0	6,399	100.0	8,606	100.0
Total (excl. fertilizer subsidies)	741		1,291		1,939		2,125		2,473		8,540		3,889		4,815		5,938			
In US\$ billion																				
Total	2.33		3.43		4.93		5.20		5.17/c		21.06		6.42		8.04		10.24			
(of which project aid)	(0.47)		(1.13)		(1.87)		(1.78)		(2.00)/c		(7.25)									
Total (excl. fertilizer subsidies)	1.79		3.11		4.67		5.12		5.01/c		19.70		6.22		7.70		9.50			

/a Law and order, defense and security, government apparatus.
/b Trade and cooperatives, religion, information and science.
/c At time-weighted average exchange rate for FY78/79 of US\$1 = Rp 494.

Source: Ministry of Finance.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Project Aid by Sector, 1974/75 - 1982/83
(Rp billion)

Sector	Actual												Budget					
	1974/75		1975/76		1976/77		1977/78		1978/79		1979/80		1980/81		1980/81		1982/83	
	Amt.	share %	Amt.	share %	Amt.	share %	Amt.	share %	Amt.	share %	Amt.	share %	Amt.	share %	Amt.	share %	Amt.	share %
Agriculture & irrigation	26	13	43	9	116	15	145	20	135	14	155	11.8	223	15.6	230	14.7	263	14.4
Industry & mining	64	33	76	16	143	18	95	13	199	20	324	24.6	226	15.8	661	42.4	707	38.7
Electric power	39	20	90	19	171	22	164	22	208	21	240	18.2	264	18.5				
Transportation & tourism	42	21	227	48	283	37	213	29	250	25	192	14.6	308	21.5	298	19.1	381	20.8
Manpower and transmigration	.	.	1	.	1	.	10	1	12	1	23	1.7	39	2.7	38	2.4	52	2.8
Regional development	.	.	.	.	2	.	8	1	8	1	18	1.4	24	1.7	24	1.5	127	1.5
Education	8	4	7	1	5	1	29	4	35	4	43	3.3	50	3.5	43	2.8	81	4.4
Health	7	4	7	1	6	1	15	2	22	2	34	2.6	36	2.6	41	2.6	44	2.4
Housing & water supply	1	.	3	1	3	.	28	4	18	2	28	2.1	33	2.3	22	1.4	39	2.1
General public services	-	-	-	-	-	-	-	-	54	5	175	13.3	154	10.7	145	9.3	172	9.4
Government capital participation	7	4	7	1	7	1	8	1	33	3	34	2.6	36	2.5	28	1.8	21	1.1
Others	1	.	11	2	37	5	23	3	13	1	50	3.8	37	2.6	30	1.9	40	2.2
Total Project Aid /a	196	100	471	100	774	100	738	100	987	100	100	100.0	1,430	100.0	1,561	100.0	1,826	100.0

/a Includes commercial credits for development programs/projects.

Note: . = less than 1
Totals may not add due to rounding.

Source: Ministry of Finance.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Money Supply, 1971-81
(Rp billion)

End of period	Total	Change	(%)	Currency		Demand deposits	
				Position	(%)	Position	(%)
1971	320.8	+70.5	+28.2	199.4	62	121.4	38
1972	474.6	+153.8	+48.0	271.8	57	202.8	43
1973	669.0	+194.4	+41.0	375.0	56	294.0	44
1974	937.5	+268.5	+40.1	494.2	53	443.3	47
1975	1,250.1	+312.6	+33.3	625.3	50	624.8	50
1976	1,603.0	+407.9	+32.6	781.0	49	822.0	51
<u>1977</u>		<u>+403.4</u>	<u>+25.2</u>				
Qtr I	1,815.4	+212.4	+12.3	853.4	47	962.0	53
Qtr II	1,960.8	+145.4	+8.0	924.4	47	1,036.4	53
Qtr III	2,014.3	+53.5	+2.7	970.9	48	1,043.4	52
Qtr IV	2,006.4	-7.9	-0.4	979.1	49	1,027.3	51
<u>1978</u>		<u>+481.9</u>	<u>+24.0</u>				
Qtr I	2,110.9	+104.5	+5.2	1,035.8	49	1,075.1	51
Qtr II	2,240.5	+129.7	+6.1	1,110.1	50	1,130.4	50
Qtr III	2,370.7	+130.2	+5.8	1,155.9	49	1,214.8	51
Qtr IV	2,488.3	+117.6	+5.0	1,239.9	50	1,248.4	50
<u>1979</u>		<u>+890.2</u>	<u>+35.8</u>				
Qtr I	2,799.9	+311.6	+12.5	1,368.7	49	1,431.2	51
Qtr II	3,020.7	+220.8	+7.9	1,508.7	50	1,512.0	50
Qtr III	3,180.0	+159.3	+5.3	1,499.7	47	1,680.3	53
Qtr IV	3,378.5	+198.5	+6.2	1,545.4	46	1,833.1	54
<u>1980</u>		<u>1632.8</u>	<u>48.3</u>				
Qtr I	3,759.4	+380.8	+11.3	1,736.2	46	2,023.2	54
Qtr II	4,171.4	+412.0	+11.0	1,947.5	47	2,223.9	53
Qtr III	4,695.3	+523.9	+12.6	2,143.4	46	2,551.9	54
Qtr IV	5,011.3	+316.0	+ 6.7	2,169.5	43	2,841.8	57
<u>1981</u>		<u>1421.0</u>	<u>25.5</u>				
Qtr I	5,248.2	+236.9	+4.7	2,262.7	43	2,985.5	57
Qtr II	5,598.5	+350.3	+6.7	2,364.7	42	3,233.9	58
Qtr III	5,990.0	+391.0	+7.0	2,444.0	41	3,546.0	59
Qtr IV	6,413.0	+423.0	+7.1	2,639.0	41	3,774.0	59

Source: Bank Indonesia.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Changes in Factors Affecting Money Supply, 1972-81
(Rp billion)

End of period	Net foreign assets	Net claims on central government	Claims on official entities & public enterprises	Blocked account	Claims on business & individuals	Time & savings deposits /a	Net other items
1972	212.3	-50.8	-3.0	-	183.4	-72.2	-115.9
1973	75.3	-33.4	-57.8	-	407.6	-98.1	-214.8
1974	364.0	-131.9	294.7	-	146.9	-196.3	-208.9
1975	-588.5	162.0	926.4	-415.0	298.4	-213.3	142.6
1976	345.0	-333.4	449.8	-51.4	356.8	-300.3	-113.7
<u>1977</u>	<u>568.5</u>	<u>-275.0</u>	<u>34.8</u>	<u>67.3</u>	<u>284.2</u>	<u>-96.5</u>	<u>-179.9</u>
Qtr I	135.5	5.0	74.4	-	75.0	-1.1	-76.2
Qtr II	215.1	-138.8	30.3	29.3	87.7	-35.7	-42.7
Qtr III	165.2	-116.7	16.4	-16.3	68.0	-43.6	-19.6
Qtr IV	52.7	-24.5	-86.3	54.2	53.5	-16.1	-41.4
<u>1978</u>	<u>718.3</u>	<u>-264.8</u>	<u>973.2</u>	<u>-76.9</u>	<u>587.4</u>	<u>-195.6</u>	<u>-1,259.7</u>
Qtr I	8.1	-12.9	-18.0	81.7	156.0	-39.7	-70.7
Qtr II	-40.4	-99.4	189.9	6.7	115.4	-76.6	34.1
Qtr III	134.4	-88.7	134.5	-12.2	82.3	-26.9	-93.3
Qtr IV /b	616.2	-63.8	666.8	-153.1	233.7	-52.4	-1,129.8
<u>1979</u>	<u>1,779.2</u>	<u>-832.6</u>	<u>371.5</u>	<u>84.8</u>	<u>555.5</u>	<u>-516.4</u>	<u>-551.8</u>
Qtr I	245.9	-39.5	55.3	4.1	201.1	-34.8	-120.5
Qtr II	340.0	-208.2	87.5	8.8	202.4	-116.3	-93.5
Qtr III	341.3	-290.9	53.9	42.0	275.6	-234.2	-28.4
Qtr IV	852.0	-294.0	174.7	29.9	-123.6	-131.1	-209.4
<u>1980</u>	<u>3,055.4</u>	<u>-1,891.9</u>	<u>487.8</u>	<u>-5.2</u>	<u>1,178.8</u>	<u>-858.6</u>	<u>-333.6</u>
Qtr I	1,009.3	-424.8	-66.0	-	203.5	-168.8	-172.2
Qtr II	1,126.7	-841.9	198.5	-2.1	243.4	-302.7	-9.9
Qtr III	687.9	-266.8	210.4	-1.0	388.4	-303.1	-191.9
Qtr IV	231.5	-358.4	144.9	-2.1	343.5	-83.9	40.4
<u>1981</u>	<u>143</u>	<u>-715</u>	<u>513</u>	<u>36</u>	<u>1,818</u>	<u>-494</u>	<u>117</u>
Qtr I	301	-299	-14	-	321	4	-94
Qtr II	-187	-418	72	41	579	-71	368
Qtr III	118	-138	308	-1	493	-356	-32
Qtr IV	-89	140	147	-4	425	-71	-125

/a Includes foreign currencies deposits held by residents.

/b Includes foreign exchange valuation adjustment.

Source: Bank Indonesia.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Consolidated Balance Sheet of Monetary System, 1973-81
(Rp billion)

End of period	1973	1974	1975	1976	1977	1978/a	1979	1980	1981/b	
Assets										
<u>Foreign Assets (net)</u>	296	660	72	417	985	1,703	(650)	3,483	6,538	6,652
<u>Domestic Credit</u>	<u>1,085</u>	<u>1,395</u>	<u>2,366</u>	<u>2,789</u>	<u>2,900</u>	<u>4,046</u>	<u>(474)</u>	<u>4,225</u>	<u>3,995</u>	<u>4,261</u>
<u>Claims on Public Sector</u>	<u>154</u>	<u>317</u>	<u>991</u>	<u>1,056</u>	<u>883</u>	<u>1,441</u>	<u>433</u>	<u>1,065</u>	<u>-344</u>	<u>979</u>
<u>Central Government</u>	-35	-167	-5	-338	-613	-878	(46)	-1,711	-3,603	4,336
<u>Official entities and public enterprises</u>	189	484	1,411	1,861	1,895	2,795	(551)	3,167	3,655	3,712
<u>Government-blocked account</u>	-	-	-415	-466	-399	-476	(-164)	-391	-396	-355
<u>Claims on Private Sector</u>	<u>931</u>	<u>1,078</u>	<u>1,376</u>	<u>1,732</u>	<u>2,017</u>	<u>2,605</u>	<u>(41)</u>	<u>3,160</u>	<u>4,339</u>	<u>5,240</u>
<u>Loans</u>	<u>808</u>	<u>1,032</u>	<u>1,321</u>	<u>1,655</u>	<u>1,939</u>	<u>2,494</u>	<u>(34)</u>	<u>2,993</u>	<u>4,107</u>	<u>4,989</u>
<u>Other claims</u>	123	46	55	78	78	111	(7)	167	232	251
<u>Total Assets/ Liabilities</u>	<u>1,381</u>	<u>2,055</u>	<u>2,438</u>	<u>3,205</u>	<u>3,885</u>	<u>5,749</u>	<u>1,124</u>	<u>7,708</u>	<u>10,533</u>	<u>10,913</u>
Liabilities										
<u>Import deposits</u>	116	283	79	88	146	174	(58)	213	365	312
<u>Other items (net)</u>	278	320	381	486	608	1,766	(983)	2,279	2,461	2,239
<u>Money and Quasi Money</u>	<u>987</u>	<u>1,452</u>	<u>1,978</u>	<u>2,631</u>	<u>3,131</u>	<u>3,809</u>	<u>(83)</u>	<u>5,216</u>	<u>7,707</u>	<u>8,361</u>
<u>Money</u>	<u>669</u>	<u>937</u>	<u>1,250</u>	<u>1,603</u>	<u>2,006</u>	<u>2,488</u>	<u>(-)</u>	<u>3,379</u>	<u>5,011</u>	<u>5,598</u>
<u>Currency</u>	375	494	625	781	979	1,240	(-)	1,546	2,169	2,364
<u>Demand deposits</u>	294	443	625	822	1,027	1,248	(-)	1,833	2,842	3,234
<u>Quasi money</u>	<u>318</u>	<u>515</u>	<u>728</u>	<u>1,028</u>	<u>1,125</u>	<u>1,320</u>	<u>(83)</u>	<u>1,837</u>	<u>2,697</u>	<u>2,763</u>

/a Includes revaluation of foreign exchange on account of November 15, 1978 devaluation. Amount of adjustments is shown in brackets.

/b As of June 1981.

Source: Bank Indonesia.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Consolidated Balance Sheet of Monetary Authorities, 1974-81
(Rp billion)

End of period	1974	1975	1976	1977	1978/a	1979	1980	1981	/b
Assets									
Foreign assets	619	253	628	1,057	1,652	(561)	2,626	4,216	4,519
<u>Claims on Public Sector</u>	<u>349</u>	<u>1,254</u>	<u>1,448</u>	<u>1,537</u>	<u>2,434</u>	<u>(543)</u>	<u>2,723</u>	<u>3,018</u>	<u>2,948</u>
Central Government	122	368	239	312	509	(62)	580	604	719
Official entities and public sector enterprises	227	886	1,209	1,225	1,925	(481)	2,143	2,414	2,229
Claims on deposit money banks	294	565	640	682	846	(-)	1,129	1,722	2,120
Other assets	46	80	84	33	74	(2)	158	289	271
<u>Total Assets/Liabilities</u>	<u>1,230</u>	<u>2,145</u>	<u>2,801</u>	<u>3,301</u>	<u>5,002</u>	<u>(1,106)</u>	<u>6,636</u>	<u>9,245</u>	<u>9,858</u>
Liabilities									
<u>Reserve Money</u>	<u>773</u>	<u>1,038</u>	<u>1,333</u>	<u>1,670</u>	<u>1,847</u>	<u>(-)</u>	<u>2,421</u>	<u>3,274</u>	<u>3,381</u>
Currency outside banks and government	494	625	781	979	1,240	(-)	1,545	2,169	2,365
Currency and deposits of banks	250	382	523	623	551	(-)	780	1,058	972
Other deposits	29	31	29	68	56	(-)	96	47	45
Government deposits	242	704	950	1,154	1,646	(180)	2,362	3,896	4,703
Other liabilities	215	403	518	477	1,509	(926)	1,853	2,075	1,774

/a Includes revaluation of foreign exchange on account of November 15, 1978 devaluation. Amount of adjustments is shown in brackets.

/b As of June 1981.

Source: Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Banking System Credits by Economic Sector, 1973-81 /a
(Rp billion)

Sectors	1973	1974	1975	1976	1977	1978 /b	1979 /c	1980	1981
<u>Agriculture /d</u>	87.0	116.4	220.2	265.6	270.0	344.8	438.8	526.0	770
In rupiah	87.0	116.4	211.9	255.4	264.4	344.3	436.7	525.9	770
In foreign exchange	-	-	8.3	10.2	5.6	0.5	1.4	0.1	-
<u>Mining</u>	8.1	10.7	741.3	1,035.9	1,061.7	1,699.4	1,892.6	1,865.9	1,683
In rupiah	8.1	10.7	88.4	175.6	197.2	230.3	1,892.6	1,865.9	1,683
In foreign exchange /e	-	-	652.9	860.3	864.5	1,469.1	-	-	-
<u>Manufacturing Industry /d</u>	277.6	358.9	718.8	990.4	1,156.2	1,624.3	1,933.2	2,563.2	3,411
In rupiah	277.6	358.9	508.1	739.4	904.3	1,264.8	1,525.7	2,175.9	2,985
In foreign exchange	-	-	210.7	251.0	251.7	359.5	397.5	387.3	426
<u>Trade /f</u>	428.3	626.8	766.3	858.1	911.2	1,113.8	1,377.9	1,976.7	3,040
In rupiah	391.0	604.5	741.1	836.7	897.7	1,105.3	1,333.5	1,970.9	3,036
In foreign exchange	37.3	22.3	25.2	21.4	13.5	8.5	4.4	5.8	4
<u>Service Rendering Industry</u>	78.9	121.7	171.7	260.5	319.1	388.6	422.0	482.4	670
In rupiah	78.9	121.7	166.2	253.4	310.9	384.9	417.8	475.8	666
In foreign exchange	-	-	5.5	7.1	8.2	3.7	4.2	6.6	4
<u>Others</u>	178.5	338.2	132.2	156.0	218.3	223.3	244.0	466.1	619
In rupiah	126.5	173.5	127.3	154.3	217.8	220.4	241.5	464.1	619
In foreign exchange	52.0/g	164.7/g	4.9	1.7	0.5	2.9	2.5	3.0	-
<u>Total</u>	1,058.4	1,572.7	2,750.5	3,566.5	3,936.5	5,394.2	6,267.8	7,880.3	10,193
In rupiah /h	969.1	1,385.7	1,843.0	2,414.8	2,792.5	3,550.0	5,857.3	7,478.5	9,759
In foreign exchange	89.3	187.0	907.5	1,151.7	1,144.0	1,844.2	410.0	401.8	434

/a Credits outstanding end of period. Includes unpaid interest. Excludes interbank credits, credits to Government and to nonresidents, special liquidity credits, special credit and foreign exchange component of project aid.

/b Includes foreign exchange revaluation (Rp 681.8 billion).

/c Includes foreign exchange revaluation (Rp 698.0 billion).

/d Processing of agricultural products is classified into manufacturing industry according to International Standard Industrial Classification (ISIC) 1968.

/e Includes credits to Pertamina for repayment of foreign borrowing. Since March 1979 credit in foreign exchange to Pertamina has been converted to credits in Rupiah.

/f Includes credits for food procurement and hotel projects.

/g Includes credits in foreign exchange for all sectors.

/h Includes investment credits, small-scale investment credits (KIK) and permanent working capital credits (KMKP).

Source: Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Banking System Credits by Type of Bank, 1974-81 /a
(Rp billion)

Sectors	1974	1975	1976	1977	1978 /b	1979/b	1980	1981
<u>Bank Indonesia (Direct Credits) /d</u>	230.7	893.6	1,211.6	1,229.3	1,934.9	2,163.1	2,454.1	2,649
In rupiah	230.7	244.8	351.3	364.8	465.8	2,163.1	2,454.1	2,649
In foreign exchange /e	-	648.9	860.3	864.5	1,469.1	-	-	-
<u>State Commercial Banks /f</u>	1,135.8	1,601.9	2,007.5	2,266.7	2,831.8	3,269.8	4,300.6	5,895
In rupiah	1,003.8	1,397.2	1,774.7	2,058.2	2,548.5	2,957.3	3,959.5	5,512
In foreign exchange	132.0	204.7	232.8	208.5	283.3	312.5	341.1	383
<u>National Private Banks</u>	89.1	132.7	197.4	257.0	365.4	493.7	711.2	1,094
In rupiah	88.9	131.2	195.8	254.1	359.9	466.2	705.1	1,082
In foreign exchange	0.2	1.5	1.6	2.9	5.5	26.9	6.1	12
<u>Foreign Banks</u>	117.1	122.3	150.0	183.5	262.0	341.8	414.4	555
In rupiah	62.3	69.8	93.0	115.4	175.7	271.2	359.8	516
In foreign exchange	54.8	52.5	57.0	68.1	86.3	70.6	54.6	39
<u>Total</u>	1,572.7	2,750.5	3,566.5	5,394.2	5,467.3	6,267.8	7,880.3	10,193
In rupiah /g	1,385.7	1,843.0	2,214.8	3,550.0	3,623.0	5,857.8	7,478.5	9,759
In foreign exchange	187.0	907.5	1,151.7	1,144.0	1,844.2	410.0	401.8	434

/a Credits outstanding end of period. Includes unpaid interest. Excludes interbank credits, credits to Government and to nonresidents, special liquidity credits, special credit and foreign exchange component of project aid.

/b Includes foreign exchange revaluation (Rp 681.8 billion).

/c Includes foreign exchange revaluation (Rp 698.0 billion).

/d Excludes Bank Indonesia credits to banks.

/e Includes credits to Pertamina for repayment of foreign borrowing. Since March 1979 credit in foreign exchange to Pertamina has been converted to credits in Rupiah.

/f Includes BAPINDO.

/g Includes investment credits, small investment credits (KIK) and permanent working capital credits (KMKP).

Source: Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Small-Scale Investment Credits and
Permanent Working Capital Credits, 1974-81
(Rp million)

End of quarter	Small-scale investment credits /a			Permanent working capital credits /a		
	Number of applications approved	Approved value --- Rp million ---	Out- standing	Number of applications approved	Approved value --- Rp million ---	Out- standing
<u>1974</u>						
Qtr I	4,611	5,667	3,966	3,303	4,488	2,913
Qtr II	7,759	11,573	9,756	8,811	11,069	9,021
Qtr III	8,750	13,368	11,421	10,550	13,072	11,006
Qtr IV	9,554	15,253	13,039	14,524	15,502	12,513
<u>1975</u>						
Qtr I	11,324	18,768	15,533	15,769	17,914	13,578
Qtr II	12,836	21,657	17,294	17,626	20,693	14,681
Qtr III	14,734	24,186	18,716	21,355	24,702	17,001
Qtr IV	16,646	28,091	21,644	24,141	28,689	19,233
<u>1976</u>						
Qtr I	19,804	34,090	25,553	83,281	40,756	26,671
Qtr II	22,697	39,025	29,310	102,193	49,210	31,786
Qtr III	25,026	43,889	32,564	148,896	57,993	37,277
Qtr IV	27,827	49,602	36,086	166,149	67,080	41,446
<u>1977</u>						
Qtr I	30,741	55,269	39,605	183,877	74,786	46,342
Qtr II	33,573	61,453	43,425	217,927	88,935	52,624
Qtr III	36,347	67,797	46,600	282,775	101,771	59,047
Qtr IV	39,737	74,186	50,462	322,391	114,990	61,839
<u>1978</u>						
Qtr I	42,163	79,249	52,704	335,366	124,496	65,415
Qtr II	47,180	86,375	56,435	365,776	135,547	70,703
Qtr III	50,895	97,701	61,923	406,518	158,369	81,204
Qtr IV	54,970	105,801	64,711	420,495	177,239	83,748
<u>1979</u>						
Qtr I	57,378	112,809	67,951	438,027	188,289	93,157
Qtr II	60,176	122,302	73,979	511,684	214,094	108,656
Qtr III	65,801	139,705	85,568	610,881	262,522	129,570
Qtr IV	72,097	163,110	99,380	644,003	304,501	154,317
<u>1980</u>						
Qtr I	79,359	190,175	118,265	664,363	348,901	181,096
Qtr II	87,553	223,915	142,334	782,344	415,397	228,543
Qtr III	101,224	266,537	175,587	847,392	493,686	277,762
Qtr IV	114,504	313,973	209,747	889,761	569,150	320,583
<u>1981</u>						
Qtr I	125,255	366,259	249,004	952,992	655,631	383,746
Qtr II	138,712	421,396	288,385	1,077,871	799,299	474,347
Qtr III	153,000	477,000	322,000	1,186,000	958,000	543,000
Qtr IV	165,000	520,000	350,000	1,236,000	1,045,000	625,000

/a Cumulative as of end of period.

Source: Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Medium-Term Investment Credits by Economic Sector, 1973-September 1981 /a
(Rp million)

	1973	1974	1975	1976	1977	1978	1979	1980	1981/c
<u>Credit Approved /b</u>	<u>162,329</u>	<u>196,617</u>	<u>255,066</u>	<u>320,002</u>	<u>352,324</u>	<u>438,353</u>	<u>566,233</u>	<u>879,743</u>	<u>1,170</u>
Agriculture	16,291	19,739	34,354	44,434	61,824	80,601	108,750	151,739	197
Manufacturing industry	80,952	96,637	108,658	130,264	143,782	154,174	189,132	265,454	393
Mining	495	221	154	5,296	5,296	5,142	5,277	5,245	37
Communication & tourism	56,812	67,312	96,763	125,465	125,920	177,271	248,320	418,018	489
Others	7,779	12,708	15,137	14,543	15,502	21,149	14,754	39,287	54
<u>Credit Outstanding</u>	<u>111,083</u>	<u>136,997</u>	<u>177,788</u>	<u>246,156</u>	<u>278,180</u>	<u>332,492</u>	<u>396,987</u>	<u>554,834</u>	<u>743</u>
Agriculture	8,044	12,644	26,857	38,922	52,072	67,288	73,179	92,299	136
Manufacturing industry	59,640	69,331	78,306	94,066	105,754	115,190	140,247	176,889	225
Mining	161	147	143	4,278	3,277	2,122	1,222	219	16
Communication & tourism	38,501	45,758	62,222	99,985	106,556	133,630	172,420	257,532	330
Others	4,737	9,117	10,260	8,905	10,521	14,262	9,919	28,892	36

/a Excludes small-scale investment credits and permanent working capital credits.

/b Cumulative as of end of period. Excludes repayments.

/c As of September 1981.

Source: Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Time Deposits With State Banks, 1971-81
(Rp million)

End of:	24 months	18 months	12 months	6 months	3 months	Less than 3 months	Total /a	Interbank time deposits	Nonresident time deposits
1971	-	-	75,291	15,552	12,598	993	104,627	14,843	9,308
1972	-	-	107,576	28,699	8,819	731	145,825	23,898	20,050
1973	-	-	129,382	14,162	4,000	1,371	148,215	8,998	7,385
1974	179,934	8,090	37,226	8,298	3,708	1,385	238,641	6,983	82
1975	335,476	10,281	27,372	9,212	3,630	341	386,312	5,065	469
1976	517,568	3,987	48,500	25,082	14,031	2,544	611,712	14,466	862
<u>1977</u>									
Qtr I	541,283	3,596	48,540	24,433	9,144	1,534	630,530	14,975	1,403
Qtr II	554,612	2,645	42,123	31,588	11,785	1,002	643,755	17,356	910
Qtr III	577,807	2,349	33,933	43,486	8,490	592	666,657	15,377	859
Qtr IV	604,825	1,896	33,559	40,967	10,041	828	691,846	13,480	974
<u>1978</u>									
Qtr I	615,913	599	34,621	34,308	1,425	52	686,918	13,997	486
Qtr II	622,049	45	39,000	44,632	1,849	16	707,591	13,615	451
Qtr III	623,876	-	39,491	55,700	2,187	39	721,293	13,306	216
Qtr IV	608,971	-	42,115	51,718	3,756	52	706,612	12,840	190
<u>1979</u>									
Qtr I	608,194	-	36,259	58,304	5,056	65	707,878	14,479	170
Qtr II	616,609	-	30,191	55,489	5,720	91	708,101	15,441	156
Qtr III	615,288	-	28,939	64,927	2,737	31	711,922	15,915	161
Qtr IV	607,017	-	29,871	74,693	3,769	53	715,403	16,230	1,104
<u>1980</u>									
Qtr I	610,360	-	31,726	75,312	7,049	57	724,504	19,589	1,012
Qtr II	616,849	-	34,086	72,020	2,586	53	725,594	19,379	628
Qtr III	646,050	-	36,248	64,826	3,622	102	750,848	20,600	526
Qtr IV	656,215	-	34,447	38,747	4,914	74	734,447	19,888	559
<u>1981</u>									
Qtr I	692,309	-	33,502	24,918	2,833	85	753,647	16,149	565
Qtr II	720,211	-	37,085	25,237	2,836	112	785,481	21,572	186
Qtr III	755,300	-	38,900	23,300	3,400	100	813,800		
Qtr IV	765,200	-	42,800	18,500	2,600	100	829,200		

/a Up to 1974, includes interbank time deposits and nonresident time deposits. Since 1975, based on the decree of the Board of Directors of Bank Indonesia No. 5/16/Kep/DIR, September 20, 1972, excludes interbank time deposits and nonresident time deposits.

Source: Bank Indonesia.

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COUNTRY ECONOMIC MEMORANDUM

Principal Agriculture Products by Subsectors, 1968-80
(⁰000 tons)

Product	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980/a
<u>Food Crops</u>													
Rice	11,667	12,249	13,140	13,724	13,183	14,607	15,276	15,185	15,845	15,876	17,525	17,872	20,246
Corn	3,166	2,292	2,825	2,606	2,254	3,690	3,011	2,909	2,572	3,143	4,029	3,606	4,012
Cassava	11,356	10,917	10,478	10,690	10,385	1,186	13,031	12,546	12,191	12,488	12,902	13,751	13,532
Sweet potato	2,364	2,260	2,175	2,211	2,066	2,387	2,469	2,433	2,381	2,460	2,083	2,194	2,193
Soya beans (shelled)	420	389	498	516	518	541	589	590	522	523	617	680	642
Groundnuts (shelled)	287	267	281	284	282	290	307	380	341	414	446	424	475
<u>Fishery</u>													
Saltwater fish	723	785	807	820	836	889	949	997	1,082	1,154	1,227	1,318	1,401
Freshwater fish	423	429	421	424	433	389	388	393	401	414	420	430	439
<u>Meat and Dairy</u>													
Meat	305	309	314	332	366	379	403	435	449	468	475	486	506
Eggs	51	58	59	68	78	81	98	112	116	131	151	164	173
Milk (in mil.)	29	29	29	36	38	35	57	51	57	61	62	72	78
<u>Cash Crops</u>													
Rubber	735	777	802	804	804	844	817	782	857	837	884	98	923
Palm oil	181	189	217	248	269	290	348	397	431	483	519	642	670
Coconut/copra	1,133	1,221	1,208	1,149	1,311	1,237	1,341	1,375	1,532	1,518	1,467	1,582	1,593
Coffee	150	175	186	196	214	150	149	160	193	198	222	228	234
Tea	73	62	64	71	51	67	64	69	73	77	88	125	102
Cloves	17	11	15	14	15	22	15	15	20	39	22	35	36
Pepper	47	17	17	26	18	29	27	23	37	43	46	47	47
Tobacco	54	84	78	76	79	80	79	82	89	85	81	87	88
Cane sugar	752	922	873	1,041	1,133	1,009	1,237	1,227	1,321	1,438	1,616	1,601	1,639
Cotton	-	3	3	2	1	1	3	2	1	1	1	1	1
<u>Forestry</u>													
Teakwood (⁰ 000 cu m)	468	520	568	770	597	676	620	595	480	573	475	575	500
Other timber (⁰ 000 cu m)	4,783	7,587	11,856	12,968	17,120	25,124	22,660	15,701	20,947	22,366	30,619	25,852	21,240

/a Preliminary figures.

Source: Supplement to the President's Report to Parliament, August 1974, 1979 and 1981.

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COUNTRY ECONOMIC MEMORANDUM

Agricultural Production of Major Crops by Type of Product, 1969-80
(⁰000 tons)

Product	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980 ^{/a}
<u>Smallholders</u>												
Rubber	558	571	572	559	599	571	536	610	584	612	616	623
Coconut/copra	1,220	1,198	1,147	1,308	1,233	1,335	1,370	1,527	1,513	1,554	1,561	1,571
Coffee	162	170	178	196	140	132	144	178	181	206	209	213
Cloves	11	15	14	13	22	15	15	17	37	21	35	36
Tea	22	21	24	7	14	15	14	13	14	17	17	18
Sugar	220	196	211	247	199	250	223	267	352	485	498	572
Tobacco	75	69	69	74	69	69	74	76	72	68	73	73
Pepper	17	17	24	18	29	27	23	37	43	46	47	47
Cotton	2	3	2	2	1.1	2.9	2.4	0.9	0.9	1	1	1
Palm oil	-	-	-	-	-	-	-	-	-	-	-	-
Palm kernel	-	-	-	-	-	-	-	-	-	-	-	-
<u>Private Estates</u>												
Rubber	110	113	114	128	109	108	109	104	107	110	112	114
Coconut/copra	1	2	2	3	4	6	5	5	6	21	21	22
Coffee	5	6	7	6	4	7	6	6	6	7	8	8
Cloves	1	..	..	..	0.1	0.2	0.1	0.2	1.6	0.2	0.2	0.3
Tea	9	9	10	7	10	11	10	11	11	15	16	16
Sugar	72	74	122	130	118	127	126	152	162	71	73	74
Tobacco	-	-	-	-	-	-	-	-	-	-	-	-
Pepper	-	-	-	-	-	-	-	-	-	-	-	-
Cotton	-	-	-	-	-	-	-	-	-	-	-	-
Palm oil	60	70	79	81	82	104	126	145	147	165	168	171
Palm kernel	13	15	18	17	18	21	24	27	29	22	23	23
<u>Government Estates</u>												
Rubber	110	118	118	121	137	138	137	142	147	162	170	186
Coconut/copra	-	-	-	-	-	-	-	-	-	-	-	-
Coffee	8	9	11	12	6	10	10	10	10	10	11	13
Cloves	-	-	-	-	-	-	-	-	-	-	-	-
Tea	31	34	37	37	43	40	46	49	51	59	92	68
Sugar	630	603	708	756	693	860	878	902	924	960	1,030	993
Tobacco	9	9	7	5	11	8	8	11	12	13	14	15
Pepper	-	-	-	-	-	-	-	-	-	-	-	-
Cotton	-	-	-	-	-	-	-	-	-	-	-	-
Palm oil	129	147	170	189	207	244	271	286	338	367	474	499
Palm kernel	28	33	39	42	46	52	57	56	64	72	85	90
<u>TOTAL</u>												
Rubber	778	802	804	808	845	818	782	856	838	884	898	923
Coconut/copra	1,221	1,200	1,149	1,311	1,237	1,341	1,375	1,532	1,518	1,575	1,582	1,593
Coffee	175	185	196	214	150	149	160	194	197	223	228	234
Cloves	12	15	14	13	22	15	15	20	39	21	35	36
Tea	62	64	71	51	67	65	70	73	76	91	125	102
Sugar	922	873	1,041	1,133	1,009	1,237	1,227	1,321	1,438	1,516	1,601	1,639
Tobacco	84	78	76	79	80	77	82	87	84	81	87	88
Pepper	17	17	24	18	29	27	23	37	43	46	47	47
Cotton	2	3	2	2	3	3	2	3	2	1	1	1
Palm oil	189	217	249	270	289	348	397	431	483	532	642	670
Palm kernel	41	48	57	59	64	73	81	83	93	94	108	113

.. = Not available.

^{/a} Preliminary figures.

Source: Department of Agriculture and the Supplement to the President's Report to Parliament, August 1974, 1979 and 1981.

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Rice - Area Harvested, Production and Yield, 1968-81

Year	Area harvested (¹ 000 ha)	Average yield (tons/ha)	Paddy ^{/a} output (¹ 000 tons)	Rice output (¹ 000 tons)
1968	8,021	2.80	22,435	11,667
1969	8,014	2.94	23,556	12,249
1970	8,135	3.11	25,269	13,140
1971	8,324	3.17	26,392	13,724
1972	7,987	3.17	25,351	13,183
1973	8,403	3.34	28,091	14,607
1974	8,509	3.45	29,376	15,276
1975	8,495	3.44	29,202	15,185
1976	8,368	3.64	30,470	15,845
1977	8,360	3.65	30,531	15,876
1978	8,929	3.77	33,702	17,525
1979	8,850	3.89	34,457	17,918
1980	9,005	3.29	29,652	20,163
1981/ ^b	9,376	3.50	32,776	22,288

^{/a} Dry stalk paddy.

^{/b} Preliminary figures.

Source: Supplement to the President's Report to Parliament, August 1974, 1979 and 1981.

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Rice Production, Imports, Procurement and Consumption, 1960-80

Year	Production	Less seed, feed and losses /a	Imports (Million tons)	Procurement	BULOG stocks	Total available	Population (Mlns)	Per capita availability (kg)
1960	10.17	0.89	0.89	0.28	0.08	10.25	94.20	109
1961	9.58	0.84	1.01	0.26	0.03	9.77	96.32	101
1962	10.28	0.90	1.01	0.52	0.02	10.42	98.32	106
1963	9.16	0.83	1.07	0.44	-0.12	9.25	100.24	92
1964	9.61	0.81	1.02	0.34	0.00	9.81	102.25	96
1965	10.24	0.90	0.14	0.32	0.10	9.64	104.34	92
1966	10.75	0.94	0.24	0.64	-0.10	10.62	106.53	94
1967	10.40	0.91	0.35	0.52	0.30	9.87	108.80	91
1968	11.67	1.01	0.63	0.60	-0.35	10.94	111.17	98
1969	12.25	1.05	0.60	0.20	0.23	12.03	113.63	106
1970	13.14	1.10	0.96	0.49	-0.27	12.73	116.17	110
1971	13.72	1.14	0.49	0.62	0.00	13.07	118.81	110
1972	13.18	1.09	0.74	0.16	0.36	13.18	121.55	108
1973	14.61	1.20	1.66	0.26	-0.41	14.66	124.40	118
1974	15.28	1.24	1.07	0.53	-0.27	14.84	127.31	117
1975	15.18	1.24	0.68	0.54	0.22	14.83	130.29	114
1976	15.84	1.27	1.28	0.39	0.08	15.93	133.34	119
1977	15.88	1.27	1.96	0.42	0.08	16.60	136.46	122
1978	17.53	1.39	1.84	0.88	-0.67	17.31	139.65	124
1979	17.87	1.43	1.95	0.33	-0.37	18.76	142.92	131
1980	20.25	1.62	2.05	1.58	0.94	19.74	147.21	134

/a Assumes seed (1.5%), feed (1.5%) and losses (6.0%).

Sources: Production: Department of Agriculture and BPS
Imports, stocks and procurement: BULOG
Population: BPS.

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Area Covered Under Rice Intensification Programs, 1967-80
([^]000 ha)

<u>Year</u>	<u>Bimas</u>	<u>Inmas</u>	<u>Total</u>
1969	1,309	821	2,130
1970	1,248	845	2,093
1971	1,396	1,393	2,789
1972	1,203	1,966	3,169
1973	1,832	2,156	3,988
1974	2,676	1,048	3,724
1975	2,683	1,957	3,640
1976	2,424	1,189	3,613
1977	2,059	2,181	4,240
1978	1,960	2,888	4,848
1979	1,571	3,452	5,023
1980 <u>/a</u>	1,374	4,229	5,603

/a Preliminary figures.

Source: Supplement to the President's Report to Parliament, August 1974, 1979 and 1981.

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Production of Selected Industrial Goods, 1969/70 - 1980/81

Product	Unit	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81
Vegetable oil	^000 tons	290	284	287	293	293	294	299	309	308	357	715	889
Cigarettes	bln pieces	30	34	36	41	51	52	57	61	64	69	70	84
Textile yarn	^000 bales	182	217	239	262	316	364	445	623	678	837	950	1,060
Fabrics	mln meters	450	598	732	852	927	974	1,017	1,247	1,333	1,576	1,910	2,027
Paper	^000 tons	17	22	30	40	47	43	47	54	84	155	214	232
Urea	^000 tons	85	103	108	120	116	209	387	406	990	1,437	1,627	1,985
Salt	^000 tons	153	58	41	183	86	70	147	560	786	262	703	525
Caustic soda	^000 tons	1	1	2	3	3	4	9	9	10	9	16	19
Al-sulphate	^000 tons	-	3	7	12	17	14	14	15	19	19	13	15
Sulphuric acid	^000 tons	-	4	9	11	18	9	15	19	20	25	51	40
Oxygen	mln cu m	2	3	4	4	5	5	5	6	7	7	6	8
Acetylene	^000 cu m	-	-	-	12	99	124	241	289	305	335	247	512
Matches	mln boxes	269	322	349	475	556	707	780	772	506	540	553	586
Soap	^000 tons	133	132	132	132	131	149	165	176	195	219	203	213
Toothpaste	mln tubes	15	25	26	30	32	46	108	104	104	109	114	123
Car tires	^000 pieces	366	401	507	858	1,361	1,704	1,796	1,883	2,339	2,540	2,898	3,320
Bicycle tires	^000 pieces	2,205	2,164	1,850	2,632	5,880	6,279	7,129	7,297	7,382	7,763	7,375	7,596
Glass sheets	sq ft	-	-	-	-	50	60	62	69	78	-	-	-
Glass bottles	^000 tons	12	11	7	17	37	35	32	36	60	64	68	-
Reinforcing iron	^000 tons	5	10	74	75	120	115	202	296	240	300	500	641
Zinc plates	^000 tons	9	34	67	70	70	70	145	156	185	185	250	294
Steel pipes	^000 tons	2	3	6	34	80	94	97	107	120	118	130	194
Steel cables	^000 tons	-	-	-	15	30	30	43	85	98	100	108	145
Car batteries	^000 pieces	32	56	262	130	140	180	220	480	575	690	1,747	3,320
Dry-cell batteries	mln pieces	54	55	72	72	132	144	240	420	443	420	462	527
Radio sets	^000 pieces	364	393	416	700	900	1,000	1,101	1,100	1,000	1,536	1,019	1,111
Television sets	^000 pieces	5	5	65	60	60	135	166	213	482	733	660	730
Sewing machines	^000 pieces	14	14	262	340	500	400	520	400	484	600	478	525
Automobiles	^000 units	5	3	16	23	37	66	79	75	84	109	103	170
Motorcycles	^000 units	21	31	50	100	150	251	300	268	272	331	222	410
Cement	^000 tons	530	562	536	628	740	829	1,241	1,979	2,879	3,629	4,705	5,852

/a Preliminary figures.

/b Includes small-scale industry production.

INDONESIACOUNTRY ECONOMIC MEMORANDUMProduction, Imports and Estimated Consumption of Cement, 1967-80

Year	Production -----	Imports (¹ 000 tons) -----	Consumption /a	
			Total -----	Per capita -- (kg) --
1967	322.0	197.1	519.1	4.7
1968	410.0	249.8	659.8	5.9
1969	477.1	477.1	954.2	8.3
1970	515.0	639.1	1,154.1	9.8
1971	486.6	898.6	1,385.2	11.5
1972	595.8	1,200.4	1,796.2	14.6
1973	740.4	1,496.8	2,237.2	17.7
1974	830.9	1,737.8	2,568.7	19.9
1975	1,077.2	1,609.2	2,686.4	20.3
1976	1,809.7	1,433.5	3,243.2	24.7
1977	2,548.5	589.8	3,138.3	23.4
1978	3,648.9	420.0	4,032.4/b	29.5
1979	4,431.5	148.1	4,091.4/b	29.3
1980	5,259.4	372.2	5,091.4/b	34.5

/a Consumption = Production + Imports

/b Consumption = Production + Imports - Exports

Source: BPS.

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Production of Minerals, 1973-80

Year	Petroleum (mln bbls)	Tin concentrate	Copper ore concentrate	Nickel ore (^r 000 tons)	Bauxite	Coal	Iron sand concentrate	Gold (kg)	Silver (kg)	Natural gas (mcf)
1973	489	22.6	125.9	867.3	1,229.4	148.8	280.9	352.1	9,371.9	186.1
1974	502	25.7	212.6	878.9	1,290.1	156.2	365.2	265.3	6,464.6	202.2
1975	477	25.3	201.3	801.0 ^r	992.6	206.4	353.0	330.7	4,754.7	222.2
1976	550	23.4	223.3	1,102.0 ^r	940.3	182.9	292.3	355.2	3,397.5	312.1
1977	615	25.9	189.1	1,302.5	1,301.4	230.6	311.5	255.9	2,831.9	542.8
1978	597	27.4	180.9	1,256.5 ^r	1,007.7	264.2	233.3 ^r	253.9	2,506.4	820.1
1979	580 ^r	29.4 ^r	188.8	1,552.7	1,051.9	278.6	79.9	170.0	1,644.6	998.4
1980/a	577	32.5	186.9	1,537.6	1,249.1	304.0	74.7	256.1	2,354.6	1,045.7

Source: Department of Mines and Energy.

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COUNTRY ECONOMIC MEMORANDUM

Petroleum Products - Supply and Demand, 1970-80
(In million bbl)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Production of crude	311.6	325.6	395.6	488.5	501.8	476.9	550.3	615.1	596.8	580.4	577.0
Crude imports	0.8	2.8	2.7	1.9	2.7	2.6	7.7	25.5	24.1	30.5	32.9
Subtotal	<u>312.4</u>	<u>328.4</u>	<u>398.3</u>	<u>490.4</u>	<u>504.5</u>	<u>479.5</u>	<u>558.0</u>	<u>640.6</u>	<u>620.9</u>	<u>610.9</u>	<u>609.9</u>
Crude exports	228.1	239.6	299.1	369.5	378.9	363.1	449.1	484.2	461.9	410.7	378.7
Crude available for refineries	84.3	88.8	96.2	120.9	125.6	116.4	108.9	156.4	159.0	200.2	231.2
Changes in crude stocks (decrease = -)	0.6	-1.2	-4.3	1.6	0.7	2.9	-4.8	3.1	-2.4	14.2	38.3
<u>Refinery Inputs</u>	<u>83.7</u>	<u>90.0</u>	<u>100.5</u>	<u>119.3</u>	<u>124.9</u>	<u>113.4</u>	<u>113.7</u>	<u>153.3</u>	<u>161.4</u>	<u>186.0</u>	<u>192.9</u>
Refinery consumption	7.5	7.6	7.7	8.0	7.2	6.7	6.4	10.7	11.3	13.0	13.5
<u>Refinery Output</u>	<u>76.2</u>	<u>82.4</u>	<u>92.3</u>	<u>111.3</u>	<u>117.7</u>	<u>106.7</u>	<u>107.3</u>	<u>142.6</u>	<u>150.1</u>	<u>173.0</u>	<u>179.4</u>
<u>Export of Refined Products</u>	<u>36.3</u>	<u>33.6</u>	<u>46.7</u>	<u>56.5/a</u>	<u>45.3/a</u>	<u>36.7/a</u>	<u>41.8/a</u>	<u>51.4/a</u>	<u>40.3/a</u>	<u>49.3/a</u>	<u>53.4/a</u>
Waxy residues	27.2	32.5	39.7	53.8	41.3	32.6	35.2	42.1	36.3	48.9	51.0
Bunker fuel, avtur, etc.	9.1	1.1	7.0	2.7	4.0	4.1	6.6	9.3	4.0	0.4	2.4
<u>Available for Domestic Consumption</u>	<u>39.9</u>	<u>48.8</u>	<u>45.6</u>	<u>54.8</u>	<u>72.4</u>	<u>70.0</u>	<u>65.5</u>	<u>91.2</u>	<u>109.8</u>	<u>123.7</u>	<u>126.0</u>
Product import	2.1	6.3	11.3	5.4	12.8	15.0	30.4	18.3	16.9	15.0	22.0
<u>Total Supply</u>	<u>42.0</u>	<u>55.1</u>	<u>56.9</u>	<u>60.2</u>	<u>85.2</u>	<u>85.0</u>	<u>95.9</u>	<u>109.5</u>	<u>126.7</u>	<u>138.7</u>	<u>148.0</u>
<u>Domestic Consumption /b</u>	<u>42.0</u>	<u>46.5</u>	<u>53.5</u>	<u>64.6</u>	<u>75.7</u>	<u>84.1</u>	<u>95.0</u>	<u>105.2</u>	<u>120.3</u>	<u>134.3</u>	<u>141.8</u>
Changes in refined stocks	0.0	8.6	3.4	4.4	9.5	0.9	0.9	4.3	6.4	4.4	6.2

Source: Migas.

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Domestic Sales of Petroleum Products, 1971-80 /a
(In '000 bbl)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Aviation gas	144	118	123	139	139	143	128	134	134	130
Aviation turbo	961	1,200	1,658	2,150	2,579	2,758	2,913	3,494	3,656	4,355
Premium gasoline	100	201	359	496	661	706	710	728	618	466
Regular gasoline	10,409	10,779	11,757	12,787	14,284	15,606	17,356	19,608	21,295	23,321
Kerosene	18,927	20,697	23,146	26,769	30,623	33,259	36,880	41,717	45,458	48,975
Motor diesel	6,895	9,027	11,838	14,524	18,023	22,749	27,041	31,709	34,595	40,115
Industrial diesel	2,364	2,676	3,488	4,022	4,673	5,429	6,239	6,744	7,580	7,828
Fuel oil	4,095	5,379	7,924	8,755	7,844	8,222	10,296	11,061	13,626	15,739
<u>Total</u>	<u>43,895</u>	<u>50,077</u>	<u>60,293</u>	<u>69,642</u>	<u>78,826</u>	<u>88,872</u>	<u>101,563</u>	<u>115,195</u>	<u>126,962</u>	<u>140,930</u>

/a Excluding lubricating oil and other products.

Source: Department of Mines and Energy.

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Cost of Living Index in Jakarta, 1970-79
(Index: April 1977/March 1978 = 100)

End of period	Food-stuffs	Change (%)	Housing	Clothing	Other	General	Change (%)	Period average	
								General index	Change (%)
1970	26.2	+1.3	38.5	43.3	38.5	30.8	+8.9	30.1	+12.3
1971	26.8	+2.2	38.9	44.4	39.9	31.6	+2.6	31.4	+4.4
1972	38.7	+44.6	39.4	44.2	41.3	39.7	+25.7	33.4	+6.4
1973	49.7	+28.4	45.3	58.3	52.4	50.6	+27.4	43.8	+31.0
1974	65.7	+32.2	55.6	77.7	74.0	67.4	+33.3	61.6	+40.6
1975	81.1	+23.4	73.6	84.9	80.1	80.6	+19.7	73.4	+19.1
1976	91.8	+13.2	90.9	94.9	92.3	92.1	+14.2	87.9	+19.8
<u>1977</u>		+12.4					+11.8	97.6	+11.0
Qtr I	94.1	+2.5	94.8	95.9	93.7	94.2	+2.3		
Qtr II	96.3	+2.3	96.4	97.4	97.0	96.5	+2.4		
Qtr III	100.2	+4.0	99.3	101.3	100.5	100.3	+3.9		
Qtr IV	103.2	+3.0	102.8	101.8	102.6	103.0	+2.7		
<u>1978</u>		+4.4					+6.7	105.5	+8.1
Qtr I	104.1	+0.8	104.1	102.1	103.0	103.7	+0.7		
Qtr II	103.5	-0.6	105.3	103.3	104.0	103.7	-		
Qtr III	104.3	+0.8	105.3	105.2	109.7	105.4	+1.7		
Qtr IV	107.8	+3.4	105.7	110.4	118.8	109.9	+0.7		
<u>1979</u>		+27.1					+24.6	127.0	+20.4
Qtr I	114.7	+6.4	107.3	118.4	123.2	116.0	+5.6		
Qtr II /a	127.2	+10.9	122.2	125.9	131.3	127.8	+10.2		
Qtr III	137.8	+8.3	124.8	140.4	137.8	135.7	+6.2		
Qtr IV	137.0	-0.6	125.1	147.0	139.1	136.9	+0.9		

/a As of April 1979 the Cost of Living Index was replaced by the Jakarta Consumer Price Index (Table 9.2).

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Jakarta Consumer Price Index
(Index: April 1977/March 1978 = 100)

		Index					% change					
		Food	Housing	Clothing	Other	General	Food	Housing	Clothing	Other	General	
Weight		(40)	(28)	(10)	(22)	(100)						
1979	March	114.8	118.5	135.7	117.0	118.4	-	-	-	-	-	
	April	117.3	122.5	136.7	122.6	121.9	2.1	3.4	0.7	4.8	2.0	
	May	122.4	134.1	139.9	123.0	127.6	4.3	9.4	2.3	0.4	4.7	
	June	127.3	135.0	144.3	124.7	130.6	4.0	0.6	3.2	1.4	2.4	
	July	130.0	134.8	151.2	127.7	133.0	2.1	(0.1)	4.8	2.4	1.8	
	August	137.6	135.1	155.9	129.5	136.9	5.8	0.3	3.1	1.4	3.0	
	September	137.9	137.8	160.9	130.9	138.6	0.2	2.0	3.2	1.1	1.2	
	October	136.4	138.3	163.4	131.5	138.6	(2.4)	0.4	1.9	0.5	-	
	November	136.7	138.6	163.0	132.1	138.8	0.2	0.2	(0.6)	0.4	0.1	
	December	137.2	138.1	168.5	132.1	139.9	0.4	(0.3)	3.4	0.7	0.7	
	1980	January	138.2	141.2	169.8	131.2	140.6	0.7	2.2	0.8	0.7	0.6
		February	141.1	142.0	176.1	131.3	142.7	2.2	0.6	3.7	0.1	1.5
March		139.2	144.0	178.1	132.8	143.0	(1.4)	1.4	1.1	1.2	0.2	
April		138.1	147.3	176.1	133.5	143.8	(0.8)	2.3	(1.1)	0.5	0.6	
May		141.7	154.0	178.2	141.1	148.7	2.6	4.6	1.1	5.7	3.4	
June		144.1	158.8	178.8	142.7	151.4	1.7	3.1	0.4	1.1	1.8	
July		144.2	158.7	180.2	143.6	151.7	0.1	(0.1)	0.8	0.6	0.2	
August		148.4	157.4	183.4	144.7	153.6	2.9	(0.8)	1.7	0.8	1.2	
September		145.5	160.2	184.0	144.8	153.3	(2.0)	1.8	0.3	0.1	(0.2)	
October		148.7	160.9	184.2	144.9	154.8	2.2	0.4	0.1	0.1	1.0	
November		154.0	161.5	184.5	144.4	157.0	3.6	0.4	0.2	(0.3)	1.4	
December		152.7	160.8	184.5	144.9	156.4	(0.8)	(0.4)	0.0	0.3	(0.6)	
1981	January	155.1	162.4	184.7	145.2	157.9	1.6	1.0	0.1	0.2	1.0	
	February	157.6	162.6	184.9	145.8	159.1	1.6	0.1	0.1	0.4	0.8	
	March	160.2	164.6	185.1	145.9	160.8	1.7	1.2	0.1	0.1	1.1	
	April	160.5	168.3	185.3	146.2	162.0	0.2	2.2	0.1	0.2	0.8	
	May	160.8	168.3	185.4	146.7	162.2	0.2	-	0.1	0.3	0.1	
	June	161.5	169.9	185.5	146.8	163.0	0.4	1.0	0.1	0.1	0.5	
	July	162.8	169.4	185.5	146.9	163.4	0.8	(0.3)	-	0.1	0.2	
	August	164.0	168.3	185.6	147.5	163.7	0.7	(0.6)	-	0.4	0.2	
	September	162.0	168.3	185.7	148.4	163.1	(1.2)	-	0.1	0.6	(0.4)	
	October	165.0	171.1	185.7	149.2	165.3	1.9	1.7	-	0.5	1.3	
	November	162.7	172.0	186.1	149.2	164.6	(1.4)	0.5	0.2	-	(0.4)	
	December	163.0	175.4	186.2	149.2	165.7	0.2	2.0	-	-	0.7	
1982	January	168.1	188.4	186.8	159.7	173.8	3.1	7.4	0.3	7.0	4.9	
	February	167.0	191.9	186.8	161.4	174.7	(0.6)	1.8	-	1.1	0.5	

Source: BPS.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Indonesia Consumer Price Index
(Index: April 1977/March 1978 = 100)

	Weight <u>/a</u>	Index					% change				
		Food	Housing	Clothing	Other	General	Food	Housing	Clothing	Other	General
	(46)	(24)	(11)	(19)	(100)						
1979											
March	120.5	120.9	134.7	119.1	121.8	-	-	-	-	-	
April	122.5	125.0	137.4	126.1	125.5	1.7	3.4	2.0	5.9	3.0	
May	126.4	131.6	140.0	126.7	129.3	3.2	5.3	1.9	0.5	3.0	
June	130.7	133.4	144.6	127.9	132.3	3.4	1.4	3.3	0.9	2.3	
July	134.2	134.5	150.4	132.2	135.6	2.7	0.8	4.0	3.4	2.5	
August	139.1	135.7	155.1	134.2	138.8	3.6	0.9	3.1	1.5	2.3	
September	138.9	137.4	159.1	135.3	139.8	(0.1)	1.1	2.6	0.9	0.7	
October	138.5	139.9	163.4	137.0	141.0	(0.3)	1.8	2.7	1.2	0.9	
November	139.9	140.2	163.5	137.6	141.8	1.0	0.2	-	0.4	0.6	
December	141.1	140.9	168.2	137.7	143.1	0.9	0.5	2.9	0.1	0.9	
1980											
January	143.0	143.4	169.8	137.9	144.8	1.3	1.8	1.0	0.1	1.2	
February	146.0	144.8	173.3	138.4	146.8	2.1	0.9	2.1	0.3	1.4	
March	144.8	146.7	173.8	139.6	147.1	(0.8)	1.3	0.3	0.9	0.2	
April	144.9	149.9	174.1	142.5	148.7	0.1	2.2	0.1	2.1	1.0	
May	149.3	157.4	176.4	150.1	154.3	3.0	4.9	1.3	5.3	3.8	
June	151.3	161.1	178.8	151.3	156.6	1.3	2.4	1.4	0.8	1.5	
July	152.6	162.1	180.8	154.5	158.3	0.9	0.6	1.1	2.1	1.1	
August	155.9	162.0	184.9	155.1	160.2	2.2	(0.1)	2.3	0.4	1.2	
September	155.1	164.2	185.5	156.2	160.8	(0.5)	1.4	0.3	0.7	0.4	
October	159.2	165.6	188.4	158.0	163.5	2.6	0.9	1.6	1.2	1.7	
November	165.6	167.7	190.3	158.7	167.1	4.0	1.3	1.0	0.4	2.2	
December	165.7	168.7	190.8	159.1	167.6	0.1	0.6	0.3	0.3	0.3	
1981											
January	169.1	169.6	191.8	160.8	169.8	2.1	0.5	0.5	1.1	1.3	
February	171.0	170.4	192.4	161.5	170.9	1.1	0.5	0.3	0.4	0.6	
March	172.6	171.8	192.8	161.9	172.1	0.9	0.9	0.2	0.2	0.7	
April	173.6	175.0	193.4	163.0	173.7	0.6	1.9	0.3	0.7	0.9	
May	173.7	175.5	193.7	163.3	174.0	0.1	0.3	0.1	0.2	0.2	
June	174.4	176.9	194.4	163.5	174.7	0.4	0.8	0.4	0.1	0.4	
July	177.0	178.3	196.9	165.2	176.8	1.5	0.8	1.3	1.0	1.2	
August	178.4	178.3	197.2	166.4	177.7	0.8	-	0.2	0.7	0.5	
September	177.4	178.3	197.3	166.7	177.4	(0.6)	-	-	0.2	(0.2)	
October	180.3	179.7	198.3	168.3	179.5	1.6	0.8	0.5	1.0	1.2	
November	178.5	180.3	198.4	168.7	178.9	(1.0)	0.3	-	0.2	(0.3)	
December	179.3	182.3	198.2	168.8	179.8	0.4	1.1	(0.1)	-	0.5	
1982											
January	184.5	194.9	199.9	181.9	188.3	2.9	6.9	0.9	7.8	4.7	
February	183.7	198.4	200.2	183.7	189.3	(0.4)	1.8	0.2	1.0	0.5	

/a Arithmetic average of weights for 17 cities.

Source: BPS.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Wholesale Price Indices in Indonesia, 1972-81 /a
(1971 = 100)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	^{/b} 1981
Agriculture	118	159	218	256	321	392	430	571	712	816
Food crops	126	162	194	230	296	343	368	488	619	728
Commercial crops	91	148	225	182	265	411	451	604	632	645
Livestock	118	156	218	255	293	349	394	522	706	831
Mining & quarrying	113	125	164	195	210	237	262	343	433	525
Manufacturing	110	154	189	202	238	265	294	388	469	526
Imports	110	140	184	200	215	225	244	346	402	440
Exports	119	179	377	368	393	447	488	969	1,437	1,562
Nonoil exports	105	166	219	182	226	290	329	653	768	732
General index excluding exports	112	151	196	217	256	292	320	430	523	589
General index	114	157	232	247	283	323	354	538	706	784

/a Average index for each year.

/b Since annual figure not yet available, average June-July index used.

Source: Indikator Ekonomi (BPS).

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Domestic Price of Petroleum Products, 1972-82
(Rp/liter)

	1972	1973	1974	1975	1976	1977	1978	1979	<u>/a</u> 1980	1981	<u>/b</u> 1982
Aviation gas	35	40	50	62	70	70	70	100	150	150	240
Aviation turbo	30	40	50	62	70	70	70	100	150	150	240
Premium gasoline	40	45	55	67	90	90	90	140	220	220	360
Regular gasoline	35	41	46	57	70	70	70	100	150	150	240
Kerosene	10	11.5	13	16	18	18	18	25	37.5	37.5	60
Motor diesel (solar)	14	16	19	22	25	25	25	35	52.5	52.5	85
Industrial diesel	8.5	9	13	19	22	22	22	30	45	45	75
Fuel oil	6.5	7.5	12	19	22	22	22	30	45	45	75

/a From May 1980.

/b Prices increased on January 1.

Source: Migas.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Approved Foreign Investment by Sector, 1967-81 /a
(US\$ million)

Sector	1967-74	1975	1976	1977	1978	1979	1980	1981/b	Total 1967-81
Agriculture	77.3	0.5	9.5	26.3	3.1	25.9	43.3	25.9	211.8
Forestry	207.6	6.3	22.0	34.7	38.9	42.7	68.9	184.2	605.3
Fishery	37.6	11.0	7.2	2.7	23.1	40.3	2.4	21.6	146.1
Mining & quarrying	546.0	500.5	10.8	200.5	44.9	150.0	3.0	1.8	1,457.5
<u>Manufacturing</u>	<u>1,912.8</u>	<u>1,161.7</u>	<u>353.2</u>	<u>360.1</u>	<u>278.4</u>	<u>1,458.6</u>	<u>712.3</u>	<u>873.5</u>	<u>7,110.6</u>
Food	111.5	19.8	75.1	8.5	5.5	66.9	15.6	40.5	343.4
Textiles & leather	871.6	24.7	31.2	72.2	114.6	103.4	79.8	141.9	1,439.4
Wood & wood products	16.0	21.9	5.5	-	1.0	6.0	11.2	23.6	185.2
Paper & paper products	15.8	17.7	66.9	9.7	0.4	10.5	2.4	48.5	171.9
Chemical & rubber	233.2	67.6	39.9	79.3	25.4	365.1	281.7	275.5	1,367.7
Nonmetallic minerals	251.2	106.4	71.4	98.3	19.7	6.7	222.7	20.1	796.5
Ferrous metals	229.6	875.3	11.6	18.4	9.9	854.9	-	80.6	2,080.3
Metal products	178.3	28.3	61.5	73.7	95.9	45.1	98.8	142.8	724.4
Others	5.6	-	0.2	-	6.9	-	0.7	-	13.4
Construction	53.8	8.6	1.8	3.9	5.4	0.5	5.7	48.8	128.5
<u>Trade & Hotels</u>	<u>133.4</u>	<u>21.3</u>	<u>13.1</u>	<u>7.0</u>	<u>9.7</u>	<u>3.0</u>	<u>38.6</u>	<u>-</u>	<u>129.2</u>
Wholesale trade	11.0	-	0.7	-	-	-	-	-	11.7
Hotels	122.4	21.3	12.4	7.0	9.7	3.0	38.6	-	214.4
<u>Transport & Communication</u>	<u>30.1</u>	<u>20.7</u>	<u>4.2</u>	<u>5.0</u>	<u>36.5</u>	<u>0.2</u>	<u>32.5</u>	<u>0.1</u>	<u>129.3</u>
Transport	24.0	17.3	4.2	-	-	0.2	32.5	0.1	78.3
Communication	6.1	3.4	-	5.0	36.5	-	-	-	51.0
Real estate & business services	174.1	21.8	27.3	20.3	2.4	45.7	-	23.4	315.0
Other services	14.7	-	-	-	2.0	-	-	-	16.7
<u>Total</u>	<u>3,187.4</u>	<u>1,752.4</u>	<u>449.1</u>	<u>660.5</u>	<u>444.4</u>	<u>1,766.9</u>	<u>906.7</u>	<u>1,179.3</u>	<u>10,346.7</u>

/a Intended Capital Investment. Amounts represent original approval plus approved expansion minus cancellation.

/b Up to June.

Source: Investment Board.

INDONESIA

COUNTRY ECONOMIC MEMORANDUM

Implementation of Foreign Investment by Sector, 1967-81
(US\$ million)

Sector	1967-74	1975	1976	1977	1978	1979	1980	1981	Total 1967-81
Agriculture	29.0	3.2	8.0	12.5	10.1	4.3	14.5	13.0	94.6
Forestry	203.2	34.3	22.7	22.1	15.0	19.2	26.2	34.9	377.7
Fishery	48.0	11.3	8.5	2.8	13.5	10.5	7.9	0.4	102.9
Mining & quarrying	216.4	40.4	42.4	20.1	57.3	47.5	49.4	70.0	543.5
<u>Manufacturing</u>	<u>1,033.0</u>	<u>392.4</u>	<u>301.2</u>	<u>186.2</u>	<u>267.0</u>	<u>192.0</u>	<u>235.4</u>	<u>243.5</u>	<u>2,850.7</u>
Food	111.7	13.9	10.8	11.9	14.9	7.1	7.4	15.8	192.5
Textiles & leather	443.3	181.8	91.8	27.9	31.4	41.7	78.7	102.5	999.1
Wood & wood products	5.5	10.6	4.6	1.4	0.4	0.1	2.3	2.2	28.1
Paper & paper products	13.9	0.7	3.3	9.6	11.8	1.4	6.1	2.5	49.3
Chemical & rubber	146.3	45.9	45.7	28.0	71.7	44.8	32.0	44.5	458.9
Nonmetallic minerals	85.3	54.2	71.3	42.9	9.0	3.2	30.0	30.9	326.8
Ferrous metals	37.8	43.3	30.7	27.8	37.8	47.5	23.9	7.9	256.7
Metal products	179.9	41.1	42.4	35.4	89.9	36.0	52.0	35.3	512.0
Others	9.3	0.9	0.6	1.3	0.1	10.2	2.0	1.9	26.3
Construction	22.1	7.9	4.5	3.0	1.4	12.0	0.8	0.6	52.3
<u>Trade & Hotels</u>	<u>54.0</u>	<u>8.2</u>	<u>17.6</u>	<u>6.2</u>	<u>17.2</u>	<u>4.3</u>	<u>0.4</u>	<u>2.9</u>	<u>110.8</u>
Wholesale trade	9.8	0.1	0.2	-	0.7	-	-	2.5	13.3
Hotels	44.2	8.1	17.4	6.2	16.5	4.3	0.4	0.4	97.5
<u>Transport & Communication</u>	<u>9.7</u>	<u>2.2</u>	<u>4.4</u>	<u>2.0</u>	<u>4.7</u>	<u>21.9</u>	<u>4.8</u>	<u>1.3</u>	<u>51.0</u>
Transport	4.3	1.2	4.2	1.8	1.3	0.1	2.1	0.2	15.2
Communication	5.4	1.0	0.2	0.2	3.4	21.8	2.7	1.1	35.8
Real estate & business services	40.5	23.7	12.3	3.8	14.0	6.9	7.2	12.4	120.8
Others	82.2	23.4	3.9	0.1	5.0	-	-	-	114.4
<u>Total</u>	<u>1,738.1</u>	<u>547.1</u>	<u>425.5</u>	<u>258.8</u>	<u>405.2</u>	<u>318.6</u>	<u>346.6</u>	<u>379.0</u>	<u>4,418.9</u>

Source: Bank Indonesia.

INDONESIA
COUNTRY ECONOMIC MEMORANDUM

Approved Domestic Investment /a by Sector, 1968-81
(Rp billion)

Sector	1968-75	1976	1977	1978	1979	1980	1981/ <u>b</u>	Total 1967-79
Agriculture, fisheries & livestock	89.6	42.3	49.4	100.4	36.4	126.9	165.1	610.6
Forestry	178.7	35.1	64.0	58.5	81.8	397.6	362.1	1,147.8
Mining	50.0	-	-	18.3	32.9	37.1	13.5	151.8
<u>Manufacturing</u>	<u>1,125.3</u>	<u>174.6</u>	<u>401.4</u>	<u>531.2</u>	<u>502.3</u>	<u>861.5</u>	<u>1,469.5</u>	<u>5,065.8</u>
Textile	405.5	42.5	75.0	167.6	41.8	143.6	164.3	1,040.3
Chemicals	178.8	-2.2	98.7	103.0	142.0	431.6	582.9	1,534.8
Electric manu- facturing	24.2	-	-	-	-	-	-	24.2
Other manufac- turing	516.8	134.3	227.7	260.61	318.5	286.3	722.8	2,467.0
Construction	14.2	-1.2	-	2.6	2.1	1.5	15.1	34.3
Hotel	79.7	6.8	4.1	11.6	12.4	1.0	52.6	168.2
Real estate	92.4	41.3	35.2	15.0	3.8	24.0	-12.5	199.2
Others	111.7	7.4	19.9	24.2	16.9	53.9	71.7	305.7
<u>Total</u>	<u>1,741.6</u>	<u>276.3</u>	<u>574.5</u>	<u>761.8</u>	<u>688.6</u>	<u>1,503.6</u>	<u>2,137.1</u>	<u>7,683.4</u>

/a Intended capital investment. Figures represent original approvals plus approved expansions minus cancellations.

/b Up to June 1981.

Source: Investment Coordinating Board.

