BANGLADESH:
MACROECONOMIC ASSESSMENT

Prepared for
U.S. Agency for International Development
USAID/Bangladesh
(Contract No. PDC-0000-I-00-6134-00)

Prepared by
International Science and Technology Institute, Inc.
Washington D.C.

Esteban Hnyilicza, Team Leader
Mahbub Hossain
Selim Jahan
Azizur Rahman

August 1989

BANGLADESH: MACROECONOMIC ASSESSMENT

Table of Contents

Acknowledgements

The Macroeconomic Assessment Team wishes to record its appreciation to the members of the USAID Mission to Bangladesh, and, in particular, to Dr. Ravinder Aulakh, Director of the Office of Program Economics, for their cooperation, assistance and guidance throughout the execution of this study.

List of Tables

List of Figures

EXECUTIVE SUMMARY

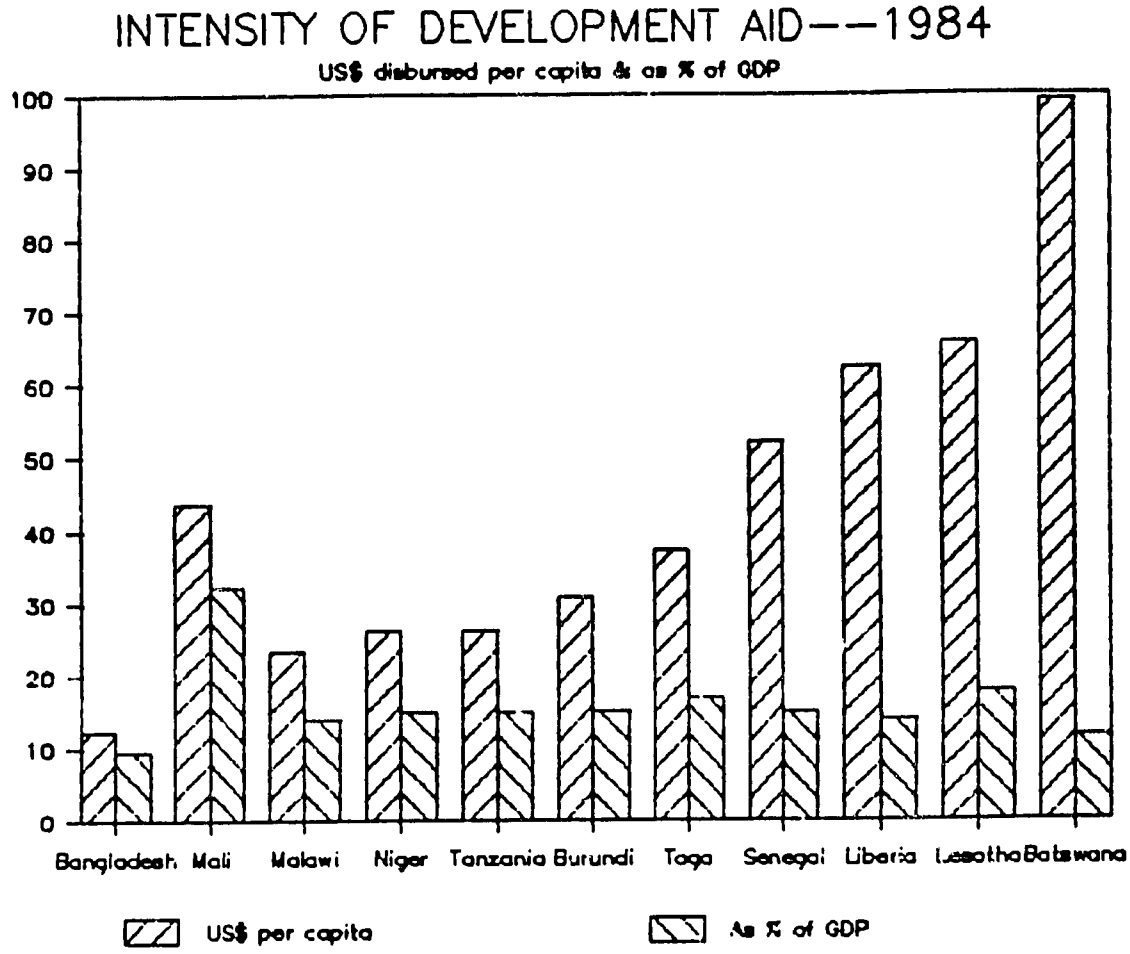
Overview

Bangladesh became an independent republic in 1971 after serving for over a century as the agricultural hinterland of West Bengal and its jute manufacturing industries centered in Calcutta. Under Pakistani rule, between 1947 and 1971, Bangladesh continued to be deprived of significant flows of investment in either human resources or infrastructure. Following independence in 1971, the consensus among foreign donors of development aid was that massive capital inflows -- of the order of 1.5 billion dollars per year -- would be required for decades merely to maintain Bangladesh's economy afloat. These facts must be considered in assessing realized economic performance and future prospects for development.

Significant improvements in the policy environment, chiefly in the form of privatization and liberalization of key urban and rural markets, have occurred in recent years, particularly since FY86. Payoffs to these measures have been limited so far due to the significant lags underlying response to structural adjustment initiatives and as a consequence of sociopolitical constraints. In rural areas, the system of land tenure concentrates economic and political power in medium and large landowners, inhibiting efforts at increasing efficiency through the operation of free competitive markets. Smaller landholders show higher productive efficiency stemming from greater cropping intensity and more intensive use of fertilizer inputs. In urban areas, overall returns to privatization of state enterprises and efforts to increase private investment have been inhibited by rent-seeking behavior, supported in large measure by the prevailing sociopolitical structure.

Time is not in Bangladesh's favor. There is probably not more than a decade left in which to position the country on a sustainable development path before options are drastically curtailed. Population pressure will continue to augment and if efforts to lower infant and child mortality rates take hold faster than attempts to decrease fertility, rates of population growth may actually increase. Options to increase the production of foodgrains at the extensive margin are nonexistent and the potential for increases at the intensive margin through technology diffusion, while substantial at present, will grow thinner with time. Even with more than half the population below the poverty line -- as measured by average caloric intake -- requirements for food imports have grown steadily over the past decade. If future income growth is distributed somewhat equitably, increases in demand for food can be very substantial.

The level of development aid from foreign donors, while substantial, is far from oversized in relative terms -- in 1984, Bangladesh ranked fourteenth among low-income countries in intensity of development aid disbursements, as measured in dollars per capita or as a percentage of GDP. Absorptive capacity limitations -- in the form of small managerial classes, a limited entrepreneurial culture and low literacy levels --


INTENSITY OF DEVELOPMENT AID--1984
US$ disbursed per capita & as % of GDP
100
90
80
70
60
50
40
30
20
10
0
Bangladesh
Mali
Malawi
Niger
Tanzania
Burundi
Togo
Senegal
Liberia
Lesotho
Botswana
US$ per capita
As % of GDP

condition the scope for increases in efficient aid delivery. However, the government's apparent success in responding to the devastating floods of 1987 and 1988 suggests that sociopolitical barriers, including hard-to-measure corrupt practices, may be at least as significant as managerial inefficiency in hampering project implementation. Donor coordination is essential in confronting these impediments. Aid delivery through non-governmental organizations (NGOs) may assist in increasing efficiency by bypassing existing obstacles. Concurrently, strict conditionality may be warranted in areas calling for tangible improvements in realized performance. As an example, development projects in the financial sector, in order to be successful, must be coupled not only with policy reform but with major improvements in the dismal records of loan recovery.

Macroeconomic Trends

Growth in domestic product has barely outstripped population increases throughout the last decade. Private domestic savings have not increased sufficiently to offset massive deficits in the public savings account resulting from major increments in government consumption expenditures. As a result, the role of domestic savings in financing domestic investment has not increased in any significant way. Requirements for foreign savings have decreased in real terms as a result of stagnation in the levels of investment expenditures and growth in remittances from abroad. Reductions in the government budget deficit have resulted from decreases in the level of development expenditures; therefore, these reductions have not become translated into lower deficits of the public savings account.

Annual growth rates of real GDP averaged 3.3 percent during FY82-FY88 or 0.8 percent in per capita terms. The share of agriculture in GDP declined by about 13 percent during FY74-FY88, with the gap being filled primarily by growth in the tertiary, or services sector. Inflation measured by the CPI has oscillated around 10 percent during much of the past decade.

Consumption and investment accounted for about 88 and 12 percent, respectively, of total domestic absorption in FY88. Between FY82 and FY88, private investment declined by -2.9 percent per annum in real terms, while public investment increased at a rate of 3.3 percent. Gross domestic investment was financed in FY88 from domestic savings by 22.6 percent, from foreign savings by 48.7 percent and from remittances from abroad by 28.7 percent.

Employment levels in FY86, when the latest Labor Force Survey was conducted, were estimated at 17.1 million workers in Agriculture, 3.5 million workers in Industry and 9.8 million workers in the Services sector, for a total employment level of 30.5 million workers. Growth of the labor force, governed by population growth and increases in participation rates, particularly among women, is estimated at 2.9 percent per year, signifying about 925 thousand yearly new entrants.

The overall government budget deficit decreased as a share of GDP from 11.2 percent in FY83 to 6.8 percent in FY88, while in the same period current expenditures increased, as a share of GDP, from 6.6 percent to 8.7 percent and development expenditures decreased from 13.3 percent to 5.9 percent. Tax revenues in real terms increased at an average annual rate of 3.2 percent during FY82-FY88, while nontax-revenues grew at 5.7 percent. Custom duties account for about 39 percent of total tax revenues.

Major structural trade deficits and heavy reliance on foreign aid characterize the behavior of the balance of payments for Bangladesh. The deficit on current account has shown an improving trend -- from 8.4 percent of GDP in FY83 to 5.7 percent in FY88. Nontraditional exports exhibited an average annual growth rate of 28.9 percent in real terms during FY81-FY88, due chiefly to growth in the export of shrimp products and ready-made garments. Total imports grew at an average rate of 3.9 percent per annum during FY81-FY88 while imports of foodgrains increased at an average annual rate of 17 percent in real terms during the same period.

Evolution of the Policy Environment

Effective monopoly of procurement and distribution of seeds, fertilizers and small-scale irrigation equipment was entrusted to the Bangladesh Agricultural Development Corporation (BADC) in 1961 leading to sharp increases in the level of fertilizer subsidies. A policy of gradual reduction and elimination of fertilizer subsidies was introduced beginning in the mid-1970s. Recognizing that subsidy elimination would increase working capital requirements for crop production, the government introduced price support policies for rice and wheat and a policy of credit expansion for agricultural production. Privatization of the distribution markets for agricultural inputs has led to increased competition among fertilizer traders, but problems remain with stock management, distribution to areas of difficult access and price instability during periods of scarcity. With the emphasis given to ground water extraction the total area under irrigation has expanded rapidly but the policy may have had adverse effects on equity, since the equipments were purchased primarily by medium and large-scale farmers who sold water to owners of adjoining plots charging rates well above those warranted for adequate recovery of capital and operating costs. Price support policies have had limited effectiveness due to government purchase levels that are small relative to the marketed surplus. The agricultural credit program was characterized by concentration of loans in the hands of a few medium and large farmers and loan recovery rates as low as twenty percent.

During most of its history the overall policy orientation of Bangladesh has been strongly inward-looking, with the usual profiles of pro-urban anti-rural bias accompanying an industrial and trade environment aimed at import substitution: low shares of agricultural investment as a proportion of relative value-added, capital subsidies in the form of low or negative real rates of interest, high levels of protection

for urban industrial products and subsidization of rural agricultural products. After the New Industrial Policy (NIP) of 1982 and particularly after the Revised Industrial Policy (RIP) of 1986, important changes were introduced aimed at a progressive liberalization of the foreign trade regime. Import liberalization measures and reduced protection rates have had beneficial effects on the efficiency of industrial enterprises, especially among the small-scale and medium-sized segments: as a result of the replacement of import quotas by tariffs, these segments gained access to imported raw materials and intermediate inputs previously available only to large-scale firms with the requisite connections to bypass import restrictions. Despite these advances, there is evidence that a significant extent of anti-export bias remains and that the number of banned or restricted imports is still substantial.

Inflation rates in Bangladesh are low by LDC standards. Success in controlling inflation can be attributed to three main causes: (1) Curtailment of domestic public and private credit expansion by virtue of the exercise of IMF conditionality; (2) Foreign sources of financing the fiscal deficit, which sharply reduce the need for the inflation tax; (3) Food aid which, by increasing the supply of foodgrains, dampens upward pressure on the prices of basic foodstuffs. Contractionary policies appear to have created substantial excess capacity in the economy and there is general agreement that, in the near term, monetary policy should be guided by the necessity of accommodating output expansion. The Bangladesh Government adopted a medium-term adjustment program in FY87, supported by a three-year agreement with the IMF Structural Adjustment Facility (SAF) and by various sectoral adjustment and investment credits from the International Development Association (IDA). The Structural Adjustment Arrangement (SAA) emphasizes a number of cross-cutting themes in the areas of Food and Agriculture, Industrial and Trade Policy, External Sector Policy, Financial Sector Policy, Public Resource Mobilization and Poverty Alleviation. Many of these programs are in the process of being implemented with early evaluations pointing to mixed successes in achieving stated objectives.

Analysis of Economic Performance

Private entrepreneurs cite three major causes for the decline in private investment since FY81: limited access to credit, excessive government regulations and overall political instability. Deeper analysis unveils alternative explanations. Recurring floods radically alter the risk profile of capital investment portfolios, lowering expected returns under moderate risk aversion. Speculative purchases of nonproductive assets divert significant portions of the highly concentrated economic surplus. Credit flows to the private sector appear to be diverted away from productive investments, partly explaining rates of nonperforming loans close to 80 percent in many bank portfolios. Capital flight in the form of currency smuggling, underinvoicing of exports and overinvoicing of imports provides additional leakages from scarce savings flows.

Technical change during FY73-FY88 has been capital-saving and labor-saving in Agriculture, capital-saving and labor-using in Industry and capital-using and labor-using

in Services. For the economy as a whole, total factor productivity has declined, largely as a result of sharply declining labor and capital productivity in the Services sector. Explanations may include the presence of disguised unemployment in Services and output undervaluation in education and health services as a result of inadequate fee structures. Indices of capacity utilization suggest the presence of an effective demand gap. This is attributable to the low levels of per capita income, to its regressive distribution, and to an increasing rate of capital goods imports as a share of investment expenditures, which creates leakages from the expansive effects of the investment multiplier.

Inequality in the distribution of income, measured by the Gini coefficient, deteriorated between FY69 and FY77, followed by recovery up to the latest figures available in FY84. Relative to other low-income LDCs, income inequality in Bangladesh is moderate, as characterized by a Gini ratio of 0.35 in FY84. Absolute poverty measured in terms of caloric intake levels, increased from 67 million in FY82 to about 73 million in FY86, although the underlying statistics are a subject of some controversy. Trends in rural poverty show a deterioration between FY74 and FY82, with an apparent improvement between FY82 and FY84. Urban poverty appears to have improved steadily between FY74 and FY84. Evidence from nutritional microsurveys, however, points to an overall deterioration in the dietetic quality due to substitution of relatively inexpensive calorie-rich foodgrains for higher-quality protein-intensive foods.

RECOMMENDATIONS

A new strategic theme underlies programs and interventions recommended for implementation by USAID/Bangladesh: investment in human resources. It is recommended that by the end of the forthcoming CDSS period, at least 50 percent of project aid be devoted to programs related to education, training and skills development, including the new initiatives described below:

- Food for Education Program;
- National Center for Trade and Investment; and
- National Center for Employment and Productivity.

The proposed new emphasis on human capital development integrates the following features:

- Exploitation of comparative advantage of USAID in gaining access to technical specialists and training resources;
- Elimination of existing sociopolitical barriers is not a strict prerequisite for

success;

- Potential payoffs are very great given the low levels of human capital serving as a point of departure;

- Direct benefits include enhanced export potential, increased employment and productivity; and

- Indirect benefits include enhanced absorptive capacity of development aid and greater efficiency of investment generally.

1. Development and Aid Delivery

1.1 NGO Network

The network of over 500 volunteer organizations -- nongovernmental organizations or NGOs -- that exists within Bangladesh is one of the largest in the world. This network constitutes an underutilized resource since its members operate in a disaggregated, disconnected fashion. By establishing an integrative framework, USAID/Bangladesh should attempt to employ this network for the purposes of increasing efficiency in development aid delivery, taking advantage of the network's presence at the community level and affording the possibility of bypassing governmental institutions.

2. Food and Agriculture

2.1 Technology Diffusion

Diffusion of modern technologies should be continued and intensified, through improved and extended financing modalities for the procurement of shallow tube-wells (STWs), high-yielding variety seeds (HYVs) and fertilizer inputs.

2.2 Agricultural Research

Support should be strengthened for research activities aimed at developing indigenous, location-specific, high-yielding varieties of foodgrains and other crops. Employment intensity and efficiency of crop production and crop processing should be enhanced by promoting research for appropriate technologies which are capital-saving, land-saving and labor-using.

2.3 Food for Education

Feasibility studies should be conducted for programs aimed at distribution of PL-480 food aid by means of lunches for schoolchildren. This would provide greater strength in negotiating government support for education and would lessen difficulties stemming from the system of indirect subsidies for food.

2.4 Efficiency of Rural Markets

With a view towards the long-term, studies should be undertaken to quantify the economic and financial costs and benefits of restructuring rural markets and the system of land ownership. Carefully conceived changes in the system of land tenure may drastically alleviate the chief impediments that now exist for the achievement of increased efficiency through greater competition in the markets for land, labor, credit, crop production, processing, and distribution. These are options that Bangladesh cannot afford not to consider.

3. Private Sector and Employment

3.1 Export Growth

A sustainable growth path which does not demand ever-increasing levels of foreign assistance requires continued improvement in export performance. To achieve this goal, the following initiatives are recommended.

- **Promotional Policies.** Export promotion should be pursued by means of:
  - Increased access to imported inputs for exporters;
  - Tariff reductions to reduce anti-export biases;
  - Duty drawback arrangements;
  - Back-to-back letter of credit facilities;
  - Income tax rebates;
  - Preferential interest rates and financing provisions; and
  - Bonded warehouse facilities.
- **Training.** A National Center for Trade and Investment should be sponsored by USAID/Bangladesh and possibly other donors with the objective of providing training in international marketing, technology transfer and export financing to Bangladeshi nationals from private

enterprises, financial institutions and universities. The Center would also promote information dissemination in comparative cost structures, transportation networks and foreign trading companies and advise the government in the formulation and implementation of export promotion policies. The Export Promotion Project of USAID/Bangladesh should be used as a point of departure for this initiative.

- **Export Substitution.** Spectacularly impressive growth in exports of ready-made garments warrants special attention be devoted to this market segment. Informal employment in the garments industry equals the sum total of employment in all industries composing the entire formal manufacturing sector. Specific studies should be commissioned to:

  -- Identify the sources of past growth for this segment;

  -- Identify possible interventions to maximize future growth paths;

  -- Identify ways and means to replicate realized growth processes for other nontraditional export segments; and

  -- Establish backward linkages with other native manufacturing sectors, e.g., cloths and fabrics -- so as to reduce the import content of garment manufactures.

3.2 Employment and Productivity

Employment generates income, and productivity growth generates income increases from a given resource base. The following initiatives are recommended to promote these objectives.

- **Microenterprise Development.** Efforts to promote the growth of small-scale and medium-scale industries, microenterprises and informal/cottage industries should be vigorously pursued through expansion of the Enterprise Development Project, the Private Rural Initiatives Project, the Women's Entrepreneurship Development Project and the creation of new projects. A network of **Microindustry Development Poles** should be created in ten key locations throughout the country. The objectives of this network will be:

  -- To provide access to credit for informal industries;

  -- To establish backward linkages with agricultural producers and forward linkages with commercial and distribution networks; and

- To serve as focal points for the delivery of training, support and extension services.

The Development Poles should actively engage the participation of rural communities in the formulation of product and marketing strategies, buttressed by the contribution of NGOs. The network of **Microindustry Development Poles** will encourage a reversal of trends in migration from rural to urban areas, while strengthening linkages between the crop, noncrop and service sectors in employment generation and between the formal and informal sectors in the supply of financial services. Complementary to the high labor-intensity of microindustries is the lower import content of their intermediate input structure, thus contributing to the overall policy objectives of structural adjustment programs.

- **Training. A National Center for Employment and Productivity** should be created aimed at promoting the training of top executives, middle-managers, engineers, technicians, foremen and production-line workers in private and public enterprises. Training should be imparted in all aspects of productivity enhancement: strategic productivity planning and the design of systems for incentives and rewards, control of direct and indirect costs for increased competitiveness, shop-floor industrial engineering and time-and-motion studies, and the design and implementation of quality circles. The Center will also conduct studies and advise the government on the identification, generation and transfer of appropriate technologies for productivity enhancement through the implementation and use of capital-saving, labor-using techniques. In addition, the Center will seek to identify modalities for increased integration between the formal and informal sectors.

4. Population and Family Planning

4.1 Demand Segmentation

In order to quantitatively evaluate the potential returns of alternative strategies for fertility reduction, it is essential to estimate, by means of suitably designed survey studies, the composition of the target population in terms of segments exhibiting differential susceptibility of their fertility behavior to alternative fertility reduction initiatives. Such key segments would include:

- Segment susceptible to supply expansion = excess demand or "unmet needs" segment;

- Segment susceptible to information dissemination and promotional marketing campaign;

- Segment susceptible to increased literacy rates;
- Segment susceptible to increases in income and physical quality of life indices; and
- Segment essentially unreachable -- religious beliefs, sociocultural bias.

4.2 Cost Internalization

Mechanisms should be investigated that might provide suitable incentive and disincentive signals to alternative modes of fertility behavior, thus generating, in effect, a structure for the internalization of overpopulation costs to individual economic agents.

1. INTRODUCTION

1.1 Background

Encrusted beneath the eastern shoulder of the Indian sub-continent, Bangladesh faces formidable obstacles in deploying the engines of development. While young as a republic, it is not young as a nation: rooted in its economic heritage, the profiles and patterns of usable resources reflect an uneven endowment that conditions the outlook for economic expansion and the options of success for the technologies of growth.

Economic performance in the 1980s shows modest improvements in conventional indicators, gained against a background of adverse circumstances, both natural and man-made. Future challenges in marshalling the country's limited resources demand rigor and creativity in devising projects, policies, and programs -- plans -- that can optimize economic returns in consonance with an integrative vision of development. The search for such a strategic outlook will be the underlying theme as the Bangladesh Government commences its Fourth Five Year Plan at the turn of the decade and other stakeholders in development seek a guide for action in facing upcoming opportunities and threats. The present macroeconomic review is intended to provide USAID/Bangladesh with a framework for analysis within the context of the 1990/1995 CDSS.

1.2 Objectives

The goals of this review are limited in scope. We have not aimed at constructing an encyclopaedic treatise on the economy of Bangladesh, nor at conducting an academic inquiry into the behavioral determinants of macroeconomic performance, nor at paraphrasing the voluminous recitations of policy prescriptions and statistical trends displayed in widely accessible country studies.

Our primary objectives are twofold. Stressing inter- sectoral and economy-wide linkages, we have aimed, first, at highlighting for each of USAID's program areas, one or two strategic themes which might provide fresh insights in reviewing the priorities for development assistance and commodity aid. We find that while the emphasis of existing programs is generally sound, efforts at ex-post evaluation of projects and programs merit strengthening and will allow narrower fine-tuning of forthcoming allocations. But it is in the domain of policy dialogue wherein lies, we conclude, the greatest promise for effecting change through judicious, prudent, yet steadfast exercise of the negotiating weight conferred by grant funding.

Our second objective is to portray credible and internally consistent scenarios for the evolution of key economic aggregates throughout the forthcoming decade. The depicted projections can be helpful in appraising broad strategic options and can serve as a point of departure for more refined macroeconomic and sector-specific prognostications.

2. STRATEGIES FOR DEVELOPMENT: PERFORMANCE AND OUTLOOK

2.1 Economic Growth and Macroeconomic Trends

Growth in domestic product has barely outstripped population increases throughout the last decade. Private domestic savings have not increased sufficiently to offset massive deficits in the public savings account resulting from major increments in government consumption expenditures. As a result, the role of domestic savings in financing domestic investment has not risen to any significant extent. Requirements for foreign savings have decreased in real terms primarily as a result of stagnation in the levels of investment expenditures and growth in remittances from abroad. Reductions in the government budget deficit have resulted from decreases in the level of development expenditures: therefore, these reductions have not become translated into lower deficits of the public savings account.

2.1.1 Domestic Product and Prices

Annual growth rates of real Gross Domestic Product in Bangladesh averaged 3.3 percent during the period FY82-FY88. In per capita terms, real GDP has risen at an average annual rate of 0.8 percent since FY82. This record of moderate growth was achieved in the face of severe flood damages in FY87 and, particularly, FY88. Agricultural GDP in real terms rose at an average annual rate of 1.6 percent between FY82 and FY88 while, in the same period, annual growth rates averaged 4.7 percent in the Industry sector and 4.8 percent in the Services sector.

The share of agriculture in GDP decreased from 58.4 percent in FY74 to 45.9 percent in FY88. This decline in the relative role of agriculture was taken up primarily by the services sector, whose share increased from 31.4 percent to 40.4 percent in the same period, while the share of the industrial sector in GDP showed a slight increase from 10.2 percent to 13.6 percent between FY74 and FY88.

Figure 2.1

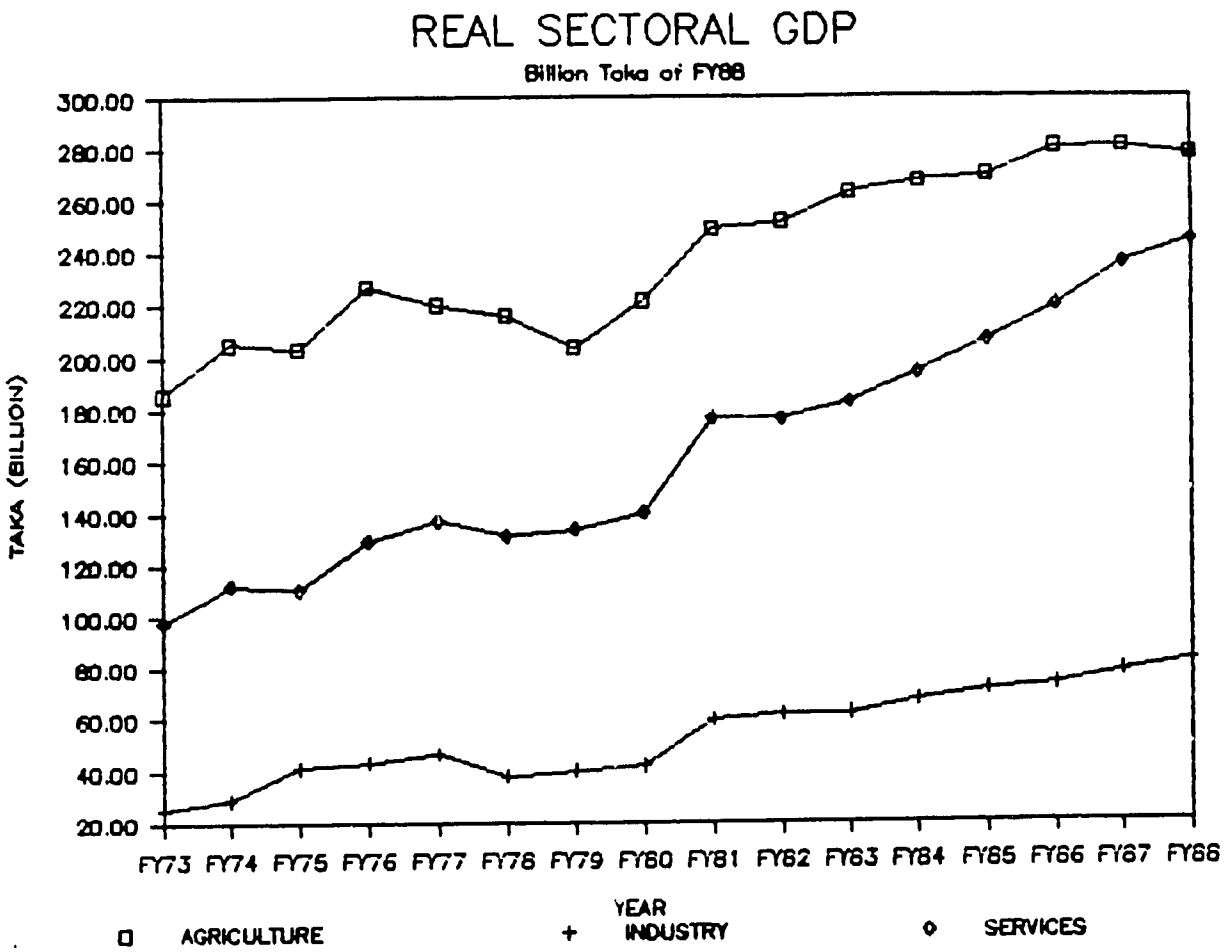

REAL SECTORAL GDP
Billion Taka of FY88
TAKA (BILLION)
300.00
280.00
260.00
240.00
220.00
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
YEAR
AGRICULTURE
INDUSTRY
SERVICES

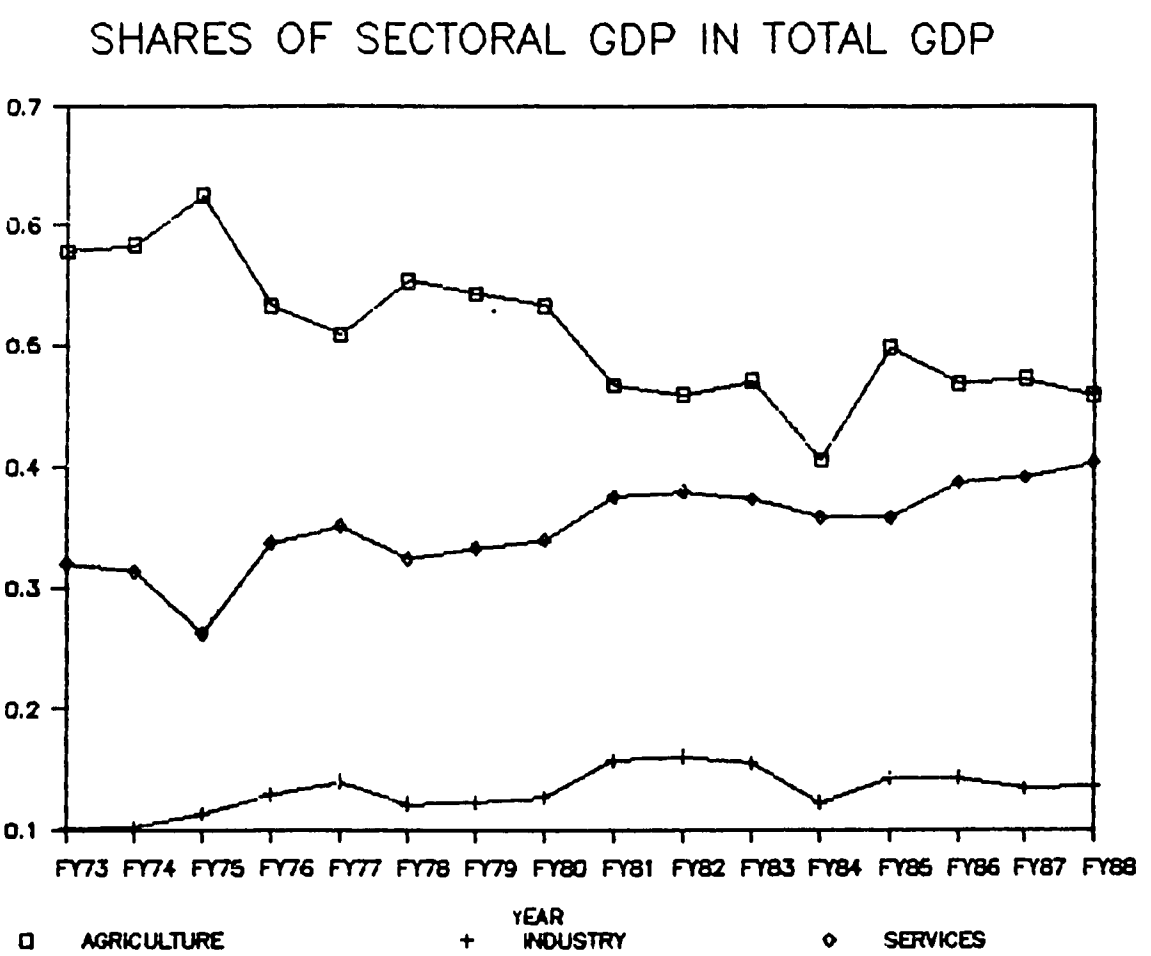
Table 2.1

GROSS DOMESTIC PRODUCT--FY88
(Current prices)

	Million Taka	Million US$	Value Share
Agriculture	277556	8884	45.9
Crops	188657	6038	31.2
Forestry	28069	898	4.6
Livestock	37194	1190	6.2
Fisheries	23636	756	3.9
Industry	82230	2632	13.6
Mining	5	-	-
Manufacturing	42620	1364	7.1
Energy & water	4998	160	0.8
Construction	34607	1108	5.7
Services	243981	7809	40.4
Transport and Communications	39571	1267	6.6
Trade	50674	1622	8.4
Banking & insurance	11431	366	1.9
Owner-occupied housing	42477	1360	7.0
Public administration and defense	25871	828	4.3
Other services	73957	2367	12.2
GDP at market prices	603780	19325	100.0

Inflation as measured by the GDP deflator averaged 11.0 percent between FY82 and FY88, with sharp declines in the rate of inflation occurring in FY83 and FY86. The Consumer Price Index increased at an average annual rate of 11.2 percent through FY82-FY88 but did not experience the fluctuations registered for the GDP deflator. This disparity in the rates of change of producer and consumer price indices may be explained by the combined effects of external inflation and of devaluation policies for the Taka; when considered jointly, these two elements exhibited throughout FY82-

Figure 2.2


SHARES OF SECTORAL GDP IN TOTAL GDP
0.7
0.6
0.6
0.4
0.3
0.2
0.1
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
YEAR
AGRICULTURE
INDUSTRY
SERVICES

FY88 a distinctly counter-cyclical tendency relative to the fluctuations in domestic producer prices, resulting in a net stabilizing effect on consumer prices.

Table 2.2

INFLATION AND MONEY SUPPLY

	FY82	FY83	FY84	FY85	FY86	FY87	FY88
GDP deflator	12.8	5.0	16.4	14.9	5.8	12.2	10.0
(% change)							
Consumer Price Index	16.3	9.9	9.7	10.9	9.9	10.4	11.4
(% change)							
Money supply	10.1	29.7	42.2	25.5	17.2	12.2	18.5
(% change)							
Devaluation	22.6	18.6	5.0	4.5	14.7	2.5	2.0
(% change)							
External inflation	15.4	11.3	-0.9	-9.0	31.2	1.4	1.8
(% change)							

2.1.2 Savings and Investment

Consumption expenditures amounted to about 88 percent of total domestic absorption during FY82-FY88 in Bangladesh, with gross domestic investment reaching about 12 percent. Between FY82 and FY88 the average annual growth rate for real consumption was 2.8 percent, while real investment registered an average annual growth rate of -0.01 percent during the same period. Private domestic investment, measured in FY88 prices, decreased from 43276 million Taka in FY82 to 35623 million Taka in FY88, for an average annual growth rate of -2.9 percent. Public investment increased in the same period at an average annual rate of 3.3 percent in real terms, from 29661 million Taka to 35623 million Taka.

Table 2.3

EXPENDITURE COMPONENTS OF GROSS DOMESTIC PRODUCT
(Million of current Taka)

	FY83	FY84	FY85	FY86	FY87	FY88
Consumption	286251	345077	406137	453667	519680	587396
Investment	39225	43040	55458	54517	66857	71246
Exports	16316	20508	24353	24477	32894	38470
Imports	(53372)	(58705)	(68986)	(70650)	(80261)	(93332)
GDP	288420	349920	416960	462010	539170	603780

Of the 71.2 billion Taka devoted to gross domestic investment in FY88, 22.6 percent was financed from domestic savings, 28.7 percent from remittances from abroad and 48.7 percent from foreign savings. Requirements for foreign savings -- equal to the gap between gross domestic investment and gross national savings -- decreased from 10 percent of GDP in FY81 to 5.7 percent of GDP in FY88, and, as a share of overall investment expenditures, declined from 61.7 percent to 48.7 percent during the same period. Remittances from abroad have leveled off after a period of growth, primarily owing to saturation of the markets for semi-skilled workers in the Middle-East. Domestic savings accounted for 5.8 percent of investment financing in FY83, and reached 22 percent by FY88, but at 2.7 percent of GDP are among the lowest in the world.

Table 2.4

FINANCING OF GROSS DOMESTIC INVESTMENT
(Million of current Taka)

	FY83	FY84	FY85	FY86	FY87	FY88
Investment	39225	43040	55456	54517	66857	71246
Domestic Savings	2307	5249	11258	8377	18596	16056
Remittances	12690	13997	10007	13736	18663	20446
National Savings	14997	19246	21265	22113	37259	36511
Foreign Savings	24227	23795	34191	32404	29598	34734

2.1.3 Employment

According to the latest Labor Force Survey compiled by the Bangladesh Bureau of Statistics (BBS), total employment reached 30.5 million in FY86, with 17.1 million in Agriculture, 3.5 million in Industry and 9.8 million in Services. Estimates for FY88 put total employment at 31.9 million. Growth of the labor force, governed by population growth and increases in participation rates, particularly among women, is estimated at 2.9 percent per year, signifying about 925 thousand yearly new entrants. Most of the growth in employment in recent years has come from the Services and Industry sectors. Measurement of unemployment and underemployment rates is unreliable due to unsatisfactory estimates of the economically active population. The Bangladesh Planning Commission estimated the unemployment rate at 38 percent in FY85 and that it improved marginally to 36 percent in FY88, but these figures are probably too low and underestimated growth in participation rates. Estimates on the size of the labor markets in the informal sector are also incomplete, but it is clear that nonwage incomes of urban and rural self-employed account for an important share of aggregate economic activity and there is a need for improved measurement in this area.

Table 2.5

EMPLOYMENT LEVELS
(Million workers)

	FY74	FY84	FY85	FY86
Agriculture	15.8	16.4	16.7	17.1
Industry	1.1	3.1	3.3	3.5
Services	4.5	8.5	9.0	9.8
Total	21.4	28.0	29.0	30.5

Evolution of real wages suggests that the upward trend registered in the early 1980s reached a peak in FY86 for some sectors, while other sectors show sustained gains

through FY88. With a base index of 100 for FY74, agricultural real wages stood at 93 in FY80, increased to 120 in FY86 and had declined to 106 by FY88 -- the corresponding figures are 90, 106 and 103 for cotton textile workers, 90, 94 and 103 for jute textile workers and 124, 134 and 151 for construction workers. In assessing the evolution of these indices, attention should be given to the fact that in the base year 1974 real wages in manufacturing were 60% of their 1970 levels and 49% of their 1964 levels; in agriculture, the corresponding figures are 71% and 62 percent.

2.1.4 Fiscal Sector

The overall government budget deficit as a share of domestic product has steadily declined from 11.2 percent of GDP in FY83 to an estimated 6.8 percent of GDP in FY88. During the same period, current expenditures increased as a share of GDP from 6.6 percent to 8.7 percent, while development expenditures showed a declining share, going from 13.3 percent of GDP in FY83 to 5.9 percent in FY88. Increases in government consumption expenditures are the major cause of growth of the deficit in the public savings account, and are attributable to increases in holiday compensation for civil servants and larger allocations for local governments, increases in the railway deficit and subsidies to private secondary schools. External aid inflows financed the entire Annual Development Plan in FY88 as well as a portion of the deficit of the central government's current operations. Domestic financing of the fiscal deficit has declined from 12.8 percent in FY83 to 3.9 percent in FY88. In FY88 prices, development expenditures in agriculture stood at 14,366 million Taka in FY82 and declined to 7,984 million Taka in FY88; development expenditures in the industrial sector declined in constant prices from 17,016 million Taka in FY82 to 15,753 million Taka in FY88; in the Services sector, development expenditures increased in real terms from 12,466 million Taka in FY82 to 17,727 million Taka in FY88.

Tax revenues in real terms increased at an average annual rate of 3.2 percent from FY82 to FY88. The share of customs duties in total tax revenue has remained steady

at about 39 percent since FY82. Sales and excise taxes account for 12.5 percent and 27 percent of total tax revenues. Nontax revenue sources amount to somewhat below 18 percent of overall government income and increased from 6,969 million Taka -- at FY88 prices -- in FY82 to 9,370 million Taka in FY88, for an average annual growth rate of 5.7 percent. In FY88, 50 percent of nontax revenues arose from fees and charges for government services, 21 percent from interest receipts on loans to autonomous bodies and government boards, 11 percent from profit transfers from financial institutions and 5 percent from profit transfers from nonfinancial public enterprises.

Table 2.6

CENTRAL GOVERMENT INCOME AND EXPENDITURE)
(Billion of current Taka)

	FY83	FY84	FY85	FY86	FY87	FY88
Total Revenues	25.4	28.6	35.9	42.3	48.0	53.3
Tax	21.1	23.7	28.9	33.0	38.8	43.6
Nontax (a)	4.3	4.9	7.0	9.3	9.2	9.7
Total Expenditure	57.8	60.6	65.9	77.4	93.0	99.2
Current	19.2	23.0	26.6	35.0	41.6	49.2
Development	29.8	30.1	30.4	36.5	46.3	40.8
Food Account (b)	6.6	3.8	4.3	1.7	0.1	5.8
Other (c)	2.2	3.7	4.6	4.3	5.0	3.5
Budget Deficit	32.4	32.0	30.0	35.1	45.0	45.9
Domestic Financing	4.1	4.2	1.3	3.7	4.7	1.8
Foreign Financing (d)	28.3	27.8	28.7	31.6	40.3	44.1

(a) Nontax revenues include receipts from fees and charges for government services, interest receipts on loans to autonomous bodies and government boards, profit transfers from financial institutions and profit transfers from nonfinancial public enterprises.

(b) Includes foodstock purchases.

(c) Comprises the Food-for-Work program, non-ADP project expenditure and net loans and advances.

(d) Includes foreign grants, debt amortization, commercial food borrowing, project aid, commodity aid and food aid.

2.1.5 Balance of Payments

As has been the case throughout its history, Bangladesh's balance of payments continues to exhibit a massive structural trade deficit and heavy reliance on foreign aid. The current account deficit over the past decade averaged 10 percent of GDP and has been financed almost entirely by external aid inflows. The overall balance of payments was in surplus throughout most of the past decade, excepting a small deficit in FY81 and a larger one in FY85 due to a decline of worker's remittances and an increase in the requirements for food imports. Foreign exchange reserves stood at about US$ 896 million at the end of FY88, or about 3.6 months of imports, compared to a level equivalent to one months's imports in FY81. In FY88, the deficit on current account reached US$ 1111 million, or 5.7 percent of GDP, while the capital account showed a surplus of US$ 1339 million, for an overall balance of payments surplus of US$ 144 million.

Merchandise imports reached US$ 2987 million in FY88. Capital goods accounted for 25.9 percent of the import bill, with food imports, chiefly foodgrains and edible oil, amounting to 21 percent, and major intermediate goods reaching 17.2 percent of total imports. Total imports in real terms increased at an average annual rate of 3.9 percent between FY81 and FY88, with most of the increase attributable to the rise in food imports which averaged an annual real rate of growth of 17 percent during FY81-FY88. The income elasticity of demand for total imports is about 1.2 but equals 0.2 if food imports are excluded.

Table 2.7

BALANCE OF PAYMENTS
(Current Million US$)

	FY83	FY84	FY85	FY86	FY87	FY88
Merchandise Exports	686	811	934	819	1074	1231
Merchandise Imports	-2246	-2353	-2647	-2364	-2620	-2987
Trade Balance	-1560	-1542	-1713	-1545	-1546	-1756
Net Services	-113	-33	-78	-125	-151	-143
Receipts	230	279	286	260	262	310
Payments	-343	-312	-364	-385	-413	-453
Net Private Transfers	653	627	477	586	731	788
Current Account Balance	-1020	-948	-1314	-1084	-966	-1111
Aid Disbursements	1345	1268	1267	1306	1595	1641
Food Aid	255	277	244	203	225	300
Commodity Aid	452	439	432	393	403	509
Project Aid	638	552	591	710	967	832
M&LT Amortization	-74	-72	-110	-117	-154	-166
Net Food Credits	47	-9	91	-69	-96	8
Net Short-Term Credit	-36	-65	-35	1	-140	-155
Other, Errors and Omissions	-27	8	-43	62	18	11
Capital Account Balance	1255	1130	1170	1183	1223	1339
Balance of Payments	235	182	-144	99	257	144

Merchandise exports totaled US$ 1231 million in FY88, or 41 percent of the import bill -- an improvement over the value of 28.1 percent registered in FY81 for total exports as a percentage of imports. Of total exports in FY88, 46.1 percent were traditional products and 53.9 percent were nontraditional exports: the comparable figures for FY81 were 82 percent for traditional and 18 percent for nontraditional exports. Nontraditional exports exhibited an average annual growth rate of 28.9 percent in real terms between FY81 and FY88, explained chiefly by impressive growth in exports of shrimp and fish products and ready-made garments -- these categories of non-traditional exports jointly accounted for 47.1 percent of all merchandise exports in FY88. The contribution of garments exports to foreign exchange earnings is dampened by an import content of around 70 percent of gross output value. Meanwhile, the share of raw and manufactured jute products in total exports had declined from 68.2 percent in FY81 to 31 percent in FY88.

Bangladesh's external debt at the end of FY88 stood at US$ 8.96 billion, equivalent to 47 percent of GDP; debt service payments as a share of exports of goods and services and private transfers declined to 22.7 percent from 27.9 percent a year earlier. Aid disbursements reached US$ 1,041 million in FY88, with an essentially unchanged trend in constant dollars since FY81. The share of project aid disbursements in total aid disbursements declined from 28 percent in FY81 to 19 percent in FY88 and a projected 16 percent in FY89.

2.2 Evolution of the Policy Environment

2.2.1 Food and Agriculture

The Bangladesh Agricultural Development Corporation (BADC) was established in 1961 and was entrusted with the effective monopoly of procurement and distribution of seeds, fertilizers and small scale irrigation equipment. A Master Plan was prepared for water resource development and the Water Development Board (BWDB) was

established for implementing it. The capital, operating and maintenance costs of the BWDB were to be borne entirely by the government.

As a result of government interventions, the sale of chemical fertilizers increased rapidly and the operations began to place a heavy burden on the government budget. In FY76, development expenditures for agriculture amounted to nearly 23 percent of total public expenditures and the subsidies program came under review. The choice of technique in water resource development alsc became a major issue. Irrigation cooperatives were found to be controlled by large and medium farmers, who tended to use the cooperatives for their own benefit.

Several policy changes were introduced in the mid-1970s. A government-sponsored program was introduced for the sale of small-scale irrigation equipment to individuals and cooperatives and the earlier rental program to cooperatives was phased out. A new marketing system (NMS) was introduced for fertilizer distribution beginning in FY78. Any person, group or organization was entitled to register as a fertilizer dealer; in order to promote wholesales, minimum quantity restrictions on fertilizer lifting were introduced. A policy of gradual elimination of fertilizer subsidies was introduced beginning in the mid-1970s. Subsidies on fertilizers were reduced from about 28 percent of the agriculture development budget in FY76 to about 10 percent in the early 1980s and were almost completely eliminated by FY86. Recognizing that subsidy elimination would increase working capital requirements for crop production, the government introduced price support policies for rice and wheat and a policy of credit expansion for agricultural production.

Recent evaluations suggest that the privatization of the distribution markets for agricultural inputs has had benefitial effects, increasing competition among fertilizer traders, who have incentives to share savings on transportation or operating costs in the form of discounts to farmers. However, there are problems with stock management, distribution to areas of more difficult access and price instability during periods of

scarcity. It appears that the overall success of the new system is dependent on careful demand projections and on the maintenance of adequate stocks by the BADC.

While the emphasis given to ground water extraction has led to very rapid expansion of the total area under irrigation, in the absence of proper zoning rules the privatization program has led to improper siting of equipment leading to low capacity utilization. The policy may also have had an adverse effect on equity, since the equipments were purchased mostly by medium and large farmers who sold water to owners of adjoining plots charging rates well above those warranted for adequate recovery of capital and operating costs.

The agricultural credit program was characterized by concentration of loans in the hands of a few medium and large farmers and a very poor rate of loan recovery. It is estimated that only about 15 to 20 percent of farm households receive agricultural loans and at most one-third of the loans are recovered when due -- with some estimates placing the loan recovery rate considerably lower.

Price support programs have not been especially successful either. Rice procurement remained a small proportion of the total harvest; in most of the good harvest years, e.g., FY76, FY81 and FY86, market prices received by growers were substantially below government procurement prices, especially after the boro harvest.
The policy of subsidy reduction for agricultural inputs led to a drastic fall in agriculture's share of the development budget. Savings from the withdrawal of susbsidies appear to have been diverted to nonagricultural sectors, with possible adverse effects for the sector's recent and future performance.

2.2.2 Industry and Trade

During most of its history the overall policy orientation in Bangladesh has been strongly inward-looking, with the usual profiles of pro-urban anti-rural bias

accompanying an industrial and trade environment aimed at import-substitution: low shares of agricultural investment as a proportion of relative value-added, capital subsidies in the form of low or negative real rates of interest, high levels of protection for urban industrial products and subsidization for rural agricultural products. After the New Industrial Policy (NIP) of 1982 and particularly after the Revised Industrial Policy (RIP) of 1986, important changes were introduced aimed at a progressive liberalization of the foreign trade regime. While not all objectives have been achieved fully, several recommendations have been implemented. The list of banned imports at the four-digit SITC level was reduced from 39 percent at the end of FY86 to 28 percent at the end of FY88 and the restricted list was reduced from 28 to 24 percent. The tariff structure was simplified by reducing the number of tariff rates from 24 to 11. Maximum protective tariffs for final goods in textiles, steel and engineering goods, chemicals and electronics were reduced from over 200 percent to 125 percent. Access to exporters of banned or restricted imports for export production was improved. Import liberalization measures and reduced protection rates have had benefitial effects on the efficiency of industrial enterprises, especially among the small-scale and medium-sized segments: as a result of the replacement of import quotas by tariffs, these segments gained access to imported raw materials and intermediate inputs previously accessible only to large-sized firms with the requisite connections to bypass import restrictions. Despite these advances, there is evidence that a significant extent of anti-export bias remains and the number of banned or restricted imports is still substantial. Worthy of note is the fact that while throughout the eighties the share of traditional jute exports in total exports declined sharply and the share of nontraditional exports significantly increased, the Effective Rate of Assistance (ERA) -- which encompasses interest rate subsidies, income tax rebates and duty drawbacks -- has remained substantially higher for jute manufactures than for shrimp products and ready-made garments.

A significant consequence of the NIP of 1982 was the denationalization of over 650 public enterprises, which were transferred to the private sector, leaving only 160 in

hands of the government. The public sector share of fixed industrial assets was reduced from 85 percent in FY81 to 40 percent in FY86. The results of the privatization policy have not been entirely satisfactory -- many privatized enterprises were closed down and others faced continuing problems with slack demand and debt servicing. Furthermore, problems with inefficiency and corruption that had plagued the public enterprises did not disappear with private ownership but persisted under the stimulus of power and influence networks that have characterized the behavior of urban elites for decades.

The Board of Investment (BOI) was set up in FY88 with representatives from both public and private sectors, and was aimed at streamlining procedures for investment project approval. By FY89, 125 out of 144 industrial sub-sectors had been opened up for private investment. Private sector's access to foreign exchange was also improved by simplifying licensing procedures for importing raw materials and machinery and by expanding access to the secondary market to those who might choose to purchase imports at the higher secondary market exchange rate.

Several measures were implemented to increase the efficiency of remaining public enterprises. Since FY84, public enterprises can determine their own production targets and set the prices for their products within a band of ten percent without prior approval from the government. Since FY88 only four monopoly and sensitive items are subject to price controls: fertilizer, sugar, paper and newsprint. Reduction of subsidy rates to commercial enterprises of fuel items has been implemented, with reductions of up to 74 percent for gasoline, 45 percent for kerosene and 20 percent for natural gas.

Various measures have also been implemented to improve management autonomy and performance monitoring for public enterprises. The capital and debt structure of a number of enterprises has been improved by conversions of debt to equity.

Promotion of small-scale industries has been undertaken through the Bangladesh Small and Cottage Industries Corporation (BSCIC). Tax advantages for small entrepreneurs have been put into place in some instances, as in the case of income tax exemption for handicraft exports. Also, interest rates for credit to some small entrepreneurs has been set at 10 percent while lending rates generally average about 16 percent.

2.2.3 Stabilization

By LDC standards, price levels in Bangladesh are relatively stable and inflation rates are relatively low. The success of macroeconomic stabilization policies in controlling inflation is an outcome worth underlining, for price stability is never to be taken for granted and its achievement removes from the economic horizon a potentially devastating risk.

Success in controlling inflation in Bangladesh can be attributed to three main causes: (1) Curtailment of domestic public and private credit expansion by virtue of the exercise of IMF conditionality; (2) Foreign sources for the financing of the fiscal deficit, thereby sharply reducing the necessity of resorting to the inflation tax, i.e., the inflation-fueling expansion of the monetary base through increases in government credit; (3) Availability of food aid which, by increasing the supply of foodgrains, dampens upward pressure on the prices of basic foodstuffs, especially during curtailments of domestic production.

Growth in the broad money supply was slowed down from 42 percent per annum in FY84 to 17 percent per annum in FY86 through curtailments in the expansion of domestic credit and would have decreased even further in the absence of the realized balance of payments surplus for that year. The contractionary effects of these steps on output have not been estimated with precision but there is general agreement that there exists substantial excess capacity in the economy and that, in the near term, monetary policy should be dictated by the need to accomodate output growth. Given

the recent failure of most world-wide efforts aimed at implementing heterodox, i.e., non-contractionary, stabilization programs, the success in Bangladesh becomes more noteworthy. It is virtually certain that a different outcome would have prevailed in the absence of strong IMF conditionality.

2.2.4 Structural Adjustment

The Bangladesh Government adopted a medium-term adjustment program in FY87, supported by a three-year agreement under the IMF Structural Adjustment Facility (SAF) and by various sectoral adjustment and investment credits from the International Development Association (IDA).

In Food and Agriculture, the structural adjustment arrangement (SAA) aims at improving the efficiency of public expenditure, promote greater private sector involvement in the distribution of agricultural inputs, improve public foodgrain procurement and distribution operations and eliminate economic subsidies for wholesale fertilizer prices.

In Industrial and Trade Policy the objectives are to liberalize and simplify investment procedures through investment sanctioning, reduce disparities of effective protection through tariff reform, liberalize imports in order to facilitate industrial production and promote backward linkages from exporters to other firms, ensuring free trade status for exporters.

In External Sector Policy the SAA aims to strengthen the balance of payments position through exchange rate management and unification of the dual exchange market, contain debt service levels at sustainable levels, raise utilization of the aid pipeline and eliminate multiple currency practices.

In Financial Sector Policy the objectives are to improve credit recovery, improve loan classification systems and bank supervision, improve the efficiency of monetary management and liberalize the structure of interest rates.

In the area of Public Resource Mobilization, the SAA aims to rationalize the tax system by reducing distortive elements, improve cost recovery in transport, communications, health and education sectors, and strengthen the operating efficiency and profitability of public enterprises.

In the area of Poverty Alleviation the SAA aims to raise living standards of lowest income groups by targeting direct subsidies to lower income groups, expanding employment opportunities through FFW, minor crop diversification programs, small and cottage industries and growth of the non-traditional export sector.
The implementation of the above set of policies and programs, which encompass a number of cross-cutting themes emphasized by the SAA, has begun with mixed success.

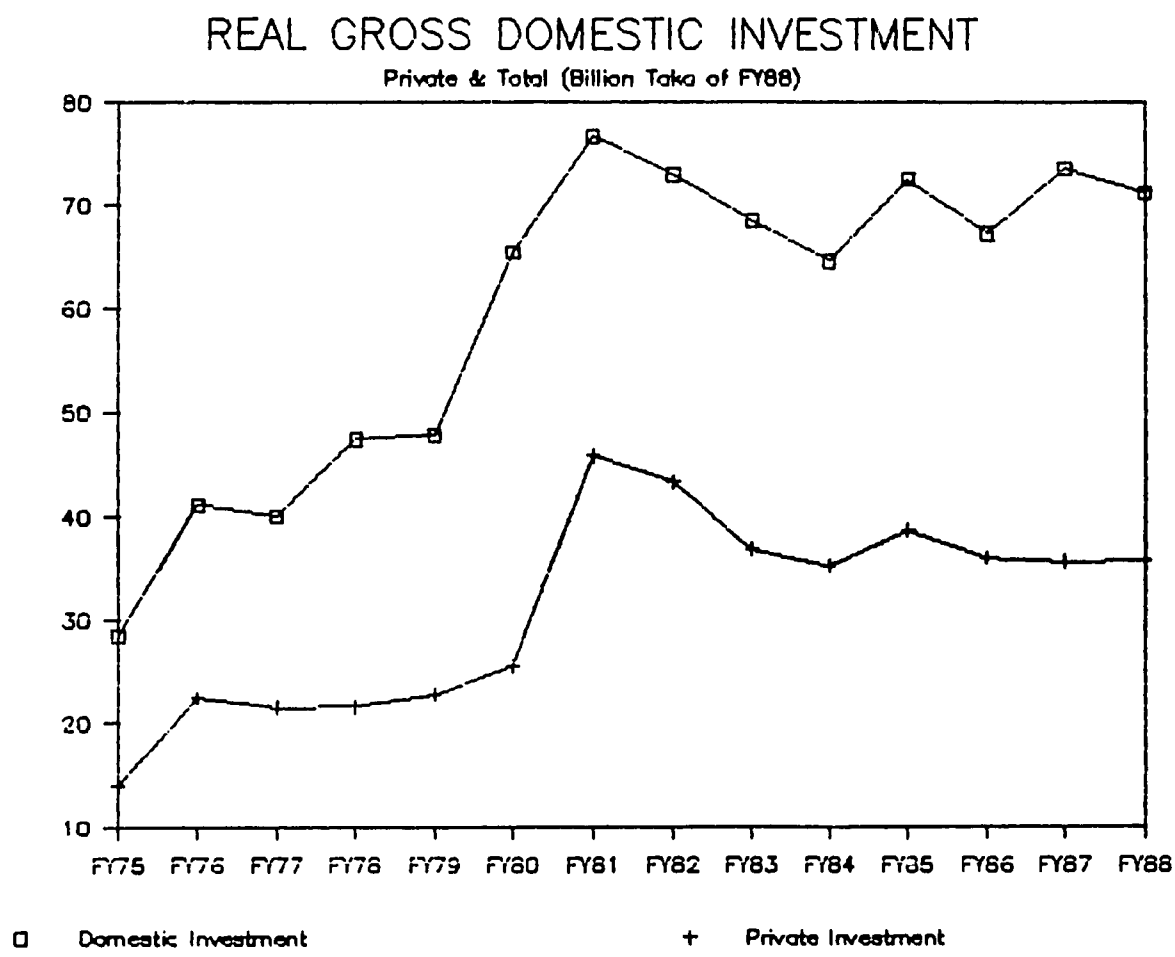
2.3 Analysis of Economic Performance

2.3.1 Private Investment

After significant increases in the period FY75-FY82, gross private domestic investment registered a decline between FY82 and FY88, decreasing from a level of 43.3 billion Taka in FY88 prices in FY82 to 35.6 billion Taka in FY88. This trend is a cause for concern, particularly in the face of overall reductions in public expenditures for capital formation following divestitures of state-owned enterprises. Among the factors cited by private entrepreneurs, in recent survey studies, as having an inhibiting effect on investment decisions were:

- Limited access to credit;
- Excessive governmental regulations; and

Figure 2.3


REAL GROSS DOMESTIC INVESTMENT
Private & Total (Billion Taka of FY88)
80
70
60
50
40
30
20
10
FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Domestic Investment
Private Investment

- Instability in the political and regulatory environment.[1]

While these considerations may not be negligible, they have no singular explanatory power since they belong to the category of opinions universally and perennially expressed by entrepreneurs in most LDC's and many semi- industrialized nations -- alternative explanations, therefore, must be sought. We examine some of these below.

2.3.1.1 Uncertainty due to Recurring Floods

The impact of recurring floods on the economy of Bangladesh far exceeds the direct losses due to curtailed production or damaged infrastructure -- it decisively shapes the investment climate by radically altering the risk profile of any capital investment portfolio. As a result, investment levels become depressed since even under moderate risk-aversion, heightened uncertainty leads to lower expected returns. In rural areas, the negative effect of financial risk on investment decisions by small-scale and micro-enterprises is compounded by physical risk.

2.3.1.2 Speculative Investments

In any economy, a certain portion of the yearly changes in net wealth held by the private sector, i.e., the flow of private savings, is accounted for by speculative purchases of non-productive assets and discretionary purchases of luxury consumer durables. Typically, the share of speculative investments in the overall flow of funds is largest among households with the highest earning power. Given the small levels and high concentration of the economic surplus typical of Bangladesh, it is reasonable to conclude that the share of nonproductive speculative investments in the aggregate flow of savings is significant and that, accordingly, they have a measurable impact on the rate of private capital formation. By examining trends in the prices of agricultural land

[1]Sahota, G. et al., Policy Implications of Industrial Performance,. HIID/EEPA Report No. 19, Dhaka, 1989.

relative to trends in the rural consumer price index, it could be argued, for example, that even farmland purchases and repurchases are partly explained by a speculative component. The highly skewed distribution of land ownership, signifying high concentration of scarcity rents, reinforces this hypothesis.

2.3.1.3 Credit to the Private Sector

An assessment of the performance of private domestic investment must include an examination of potential restrictions stemming from the pattern of credit flows to the private sector. The global stock of private debt stood at about 110 billion Taka at the end of FY88. Net flows of credit to the private sector totaled about 10 billion Taka in FY88, after reaching a peak for the FY75-FY88 period of approximately 20 billion Taka in FY84, measured in FY88 prices, following a sharp credit expansion in FY83-FY84.

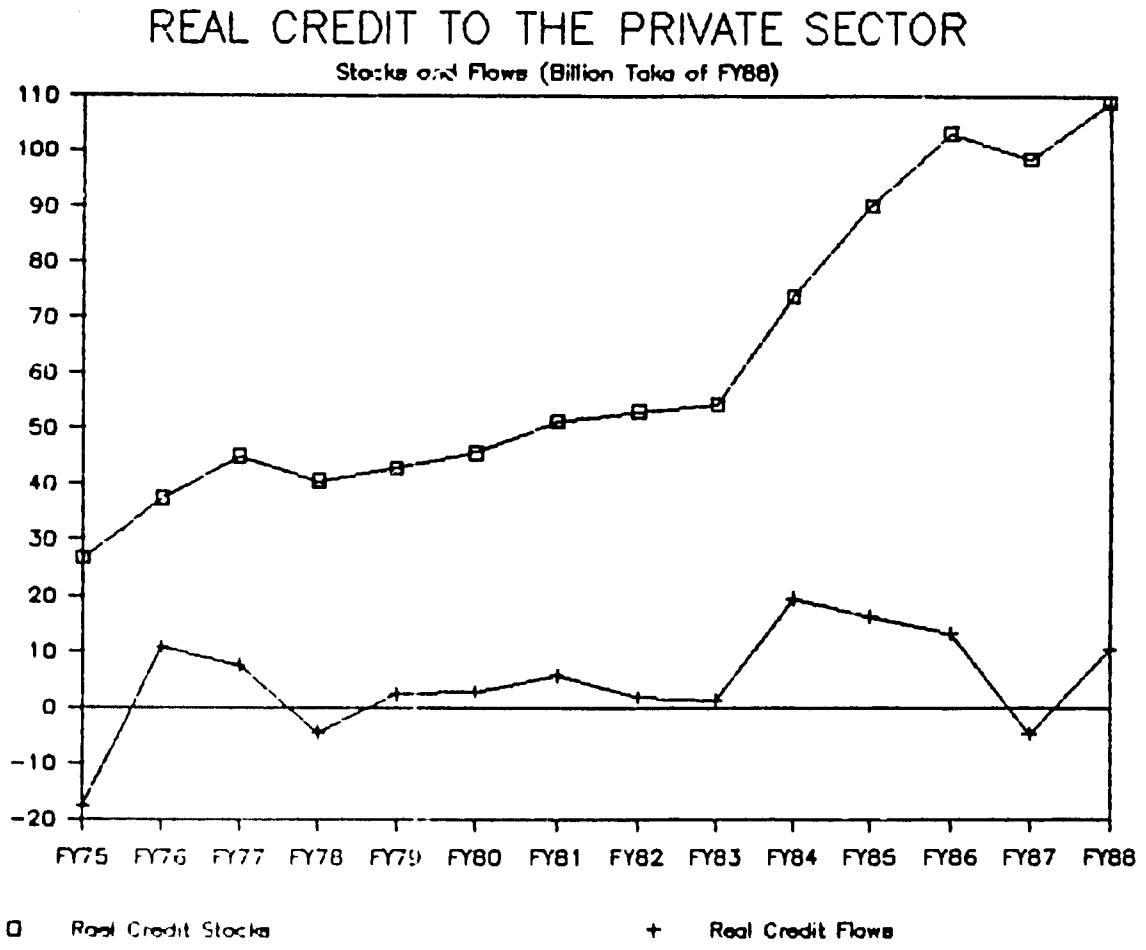
It is revealing to examine the behavior of credit and investment in the years FY1982 to FY1986. In this period, outstanding credit to the private sector increased at a staggering average rate of 26 percent per annum in real terms. During the same period, gross private domestic investment actually declined in real terms, measured in FY88 prices, from 36.8 billion Taka in FY83 to 35.9 billion Taka in FY86.

Table 2.8

PRIVATE SECTOR CREDIT AND INVESTMENT
Billion Taka of FY88

	FY83	FY84	FY85	FY86
Real Private Sector Credit	54.1	73.7	90.0	103.2
% change		40%	21%	17%
Real Private Investment	36.8	35.2	38.7	35.9
% change		-2%	10%	-7%

Figure 2.4


REAL CREDIT TO THE PRIVATE SECTOR
Stocks and Flows (Billion Taka of FY88)
110
100
90
80
70
60
50
40
30
20
10
0
-10
-20
FY75
FY76
FY77
FY78
FY79
FY80
FY81
FY82
FY83
FY84
FY85
FY86
FY87
FY88
Real Credit Stocks
Real Credit Flows

The above record suggests that credit availability is not the only, nor the chief, constraint to investment expansion. It has important implications for an analysis of the financial sector and for the design of financial reform policies in Bangladesh. First, it radically challenges the relevance of the McKinnon-Shaw hypothesis. This view maintains that real rates of interest set by administration at levels well below equilibrium, i.e., financial repression, lead to financial disintermediation, namely the process whereby savings flows are channelled away from the financial system, thereby creating a shortage of loanable funds which puts limits on economic expansion. If it were the case that credit rationing induced by financial disintermediation and in turn caused by financial repression was in fact the limiting factor to productive investment, then it would indeed follow that the prescribed cure would be financial liberalization, thereby releasing interest rates to their equilibrium levels and in turn putting an end to financial disintermediation and the induced scarcity of loanable funds. But, if as the above evidence suggests, lack of dynamism in private investment expenditures is not attributable to credit scarcity, it follows that financial liberalization would not be sufficient to increase private investment. The second conclusion that can be derived from the above set of empirical observations is that the unsatisfactory performance of the financial sector is attributable to very pronounced misallocation of resources and dysfunctions of large proportions in the final destination of credit flows -- with severely negative effects on the levels of productive investment. This fact, coupled with rates of nonperforming and delinquent loans approaching 85 and 90 percent of loan portfolios, also suggests that any program of financial reform which does not address the institutional and sociocultural barriers underlying the above record will have only a small probability of favorably altering the course of macroeconomic events in Bangladesh.

2.3.1.4 Capital Flight

While difficult to measure[2], capital flight is endemic amongst less-developed countries characterized by high concentrations of economic surplus and latent or actual political and institutional instability. There is no reason to suppose that Bangladesh is exempted from this form of financial hemorrhaging which, in many low-income countries, constitutes the chief structural impediment to the efficient channelling of savings to capital formation and, thus, the chief impediment to growth. There are scattered indications that the traditional forms of capital flight --underinvoicing of exports, overinvoicing of imports and smuggling of foreign currency -- are not absent in Bangladesh. The conventional explanations for capital flight are two: the differential between domestic and foreign real rates of interest, and lack of confidence in the political and institutional stability of the country. The two explanations can be merged into one by considered risk-adjusted rates of return to domestic and foreign assets. Palliatives to confront capital flight include inspection and auditing of foreign trade shipments, but there is no lasting cure to this scourge of underdevelopment other than development itself.

2.3.2 Capital Productivity

In a capital-scarce economy such as Bangladesh, measures of the average productivity of capital and of its evolution over time, are important indicators of the efficiency of resource allocation. Trends in factor productivity are also central to analyzing the potential for economic growth, since empirical studies have repeatedly shown that long-term increases in output are primarily caused not by increases in inputs but rather by factor-augmenting technological progress.

---

[2]Capital flight is sometimes estimated employing the Errors and Omissions line item in the Balance of Payments; however, this method provides only a lower bound on capital flight.

Figure 25

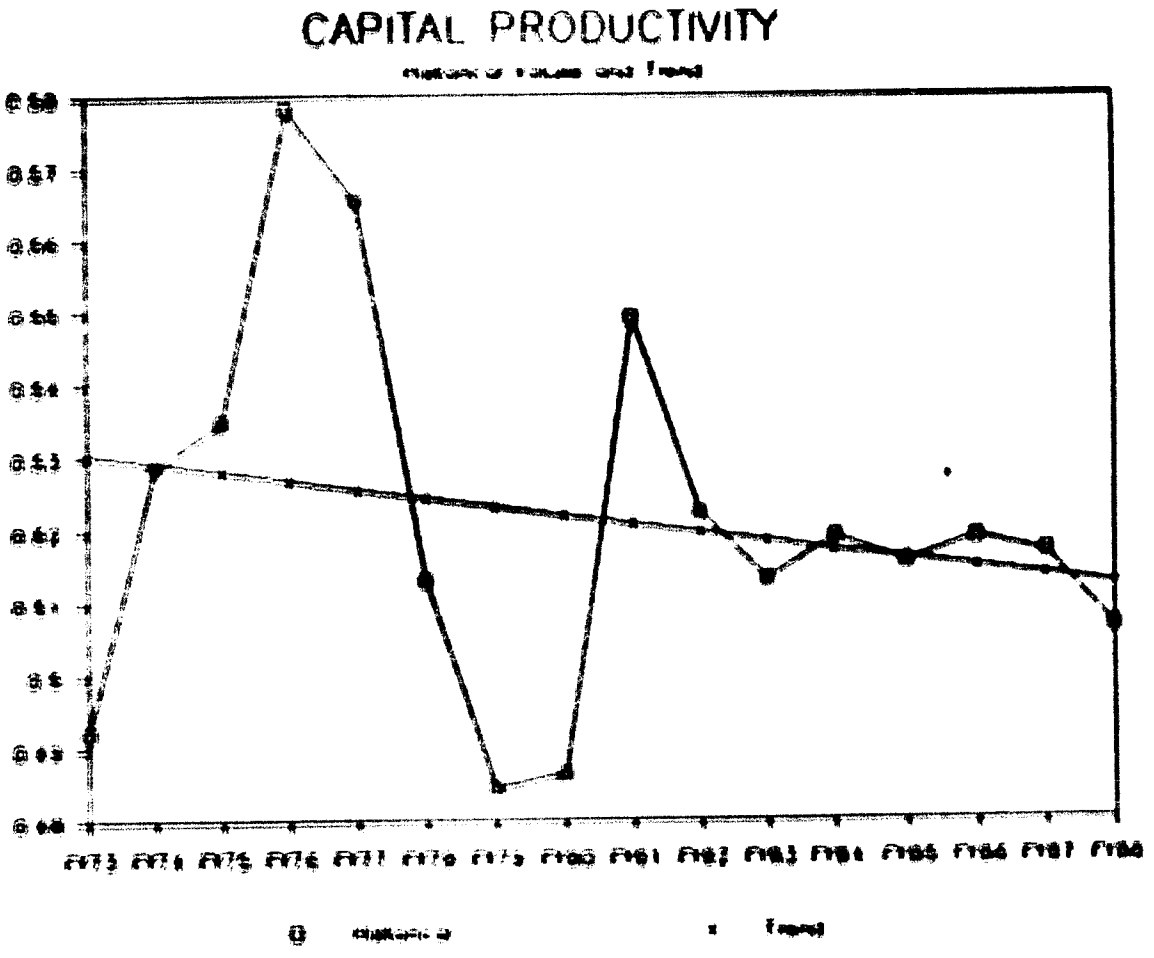


Figure 2.6

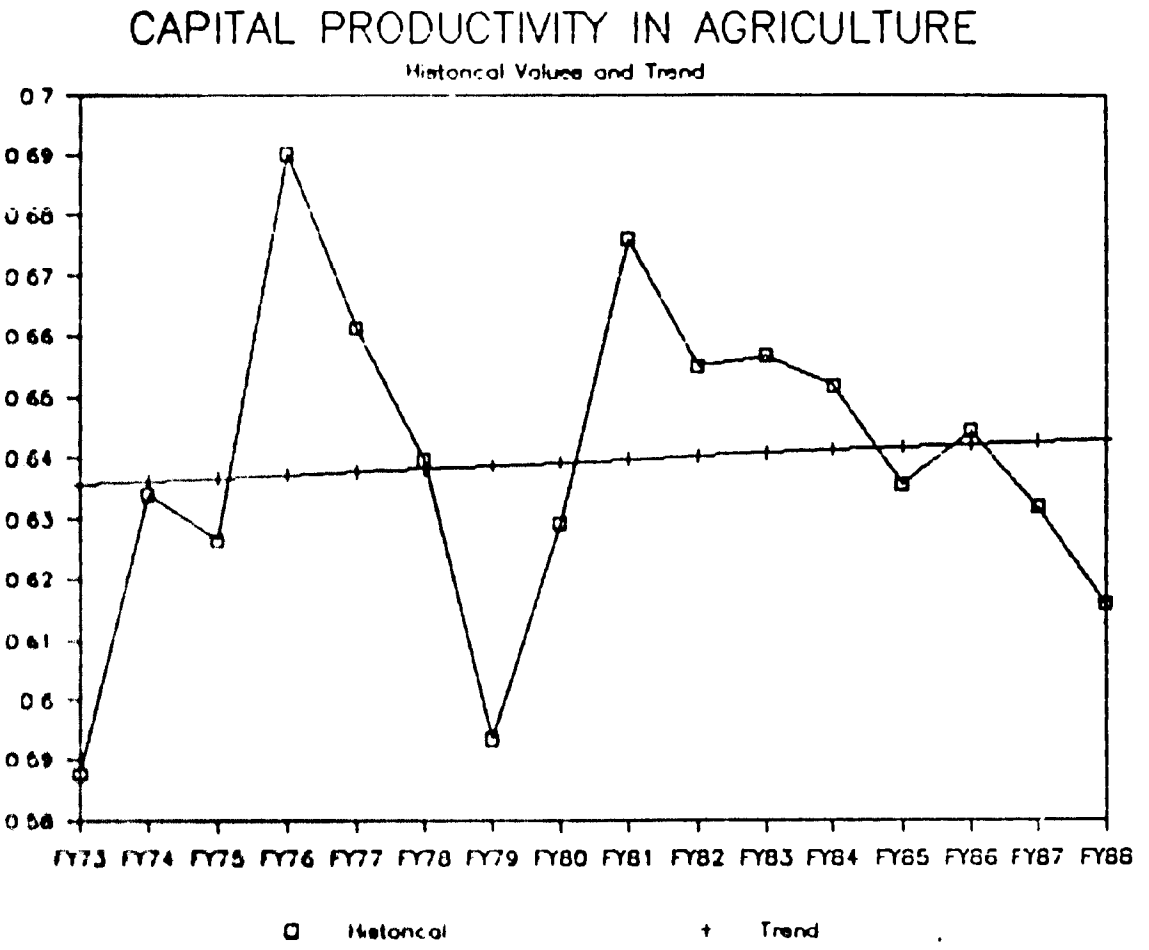

CAPITAL PRODUCTIVITY IN AGRICULTURE
Historical Values and Trend
0.7
0.69
0.68
0.67
0.66
0.65
0.64
0.63
0.62
0.61
0.6
0.59
0.58
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Historical
Trend

Figure 2.7

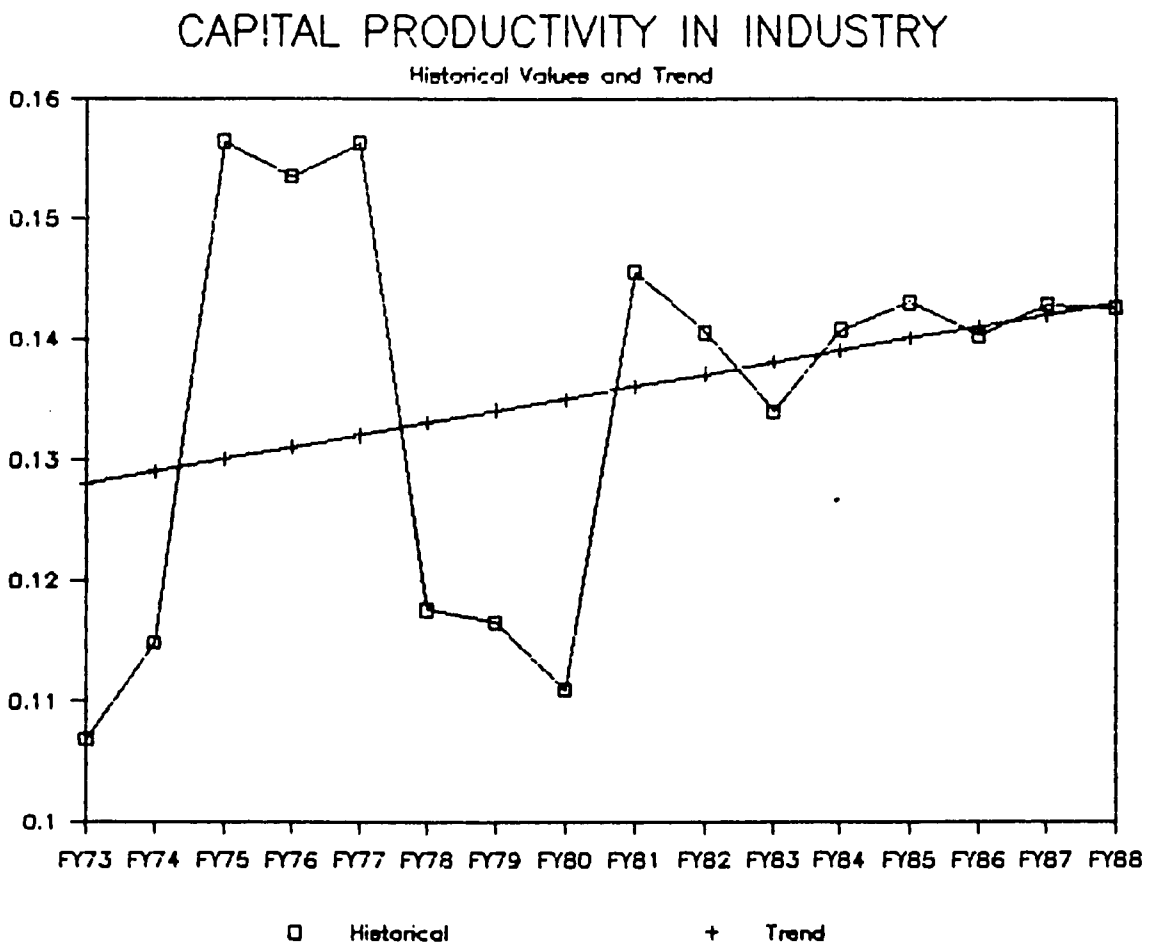
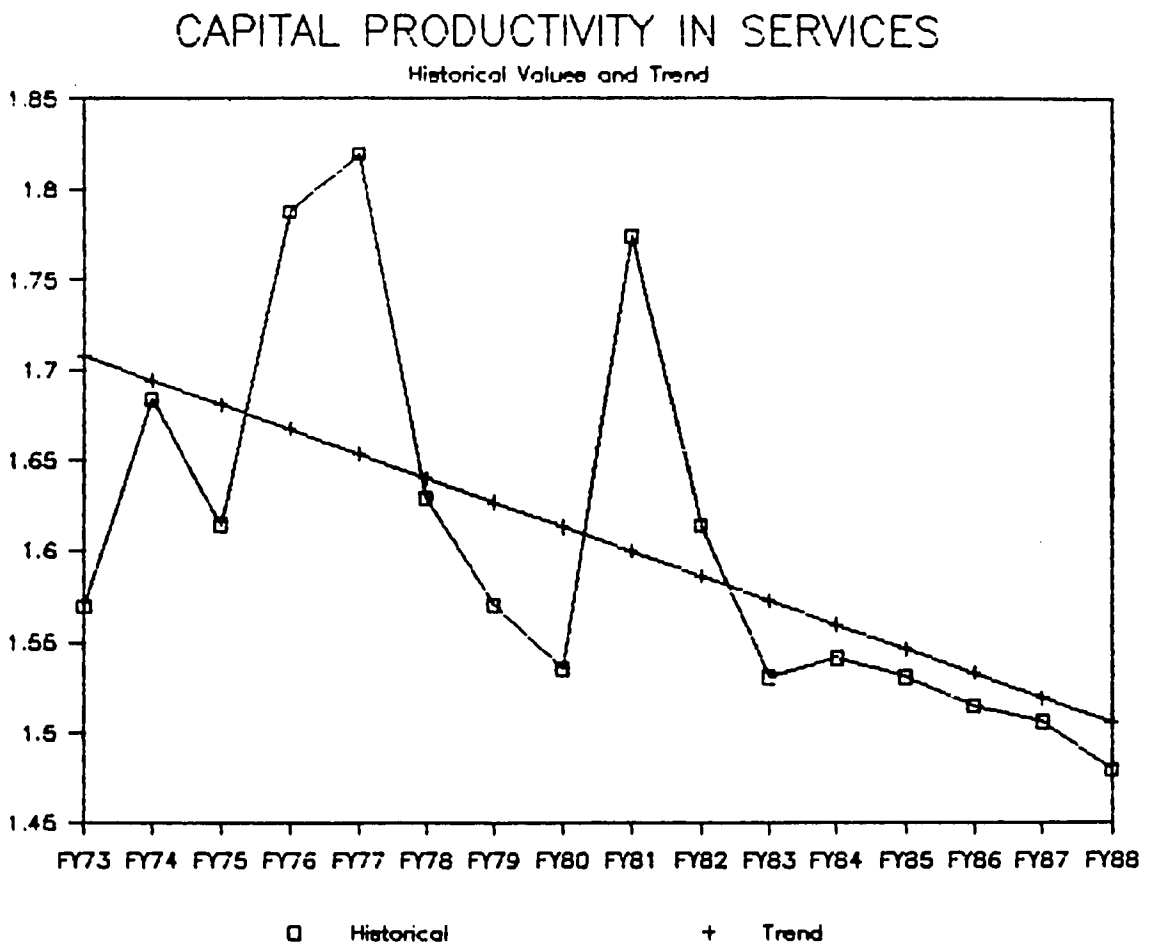

CAPITAL PRODUCTIVITY IN INDUSTRY
Historical Values and Trend
0.16
0.15
0.14
0.13
0.12
0.11
0.1
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Historical
Trend

Figure 2.8


CAPITAL PRODUCTIVITY IN SERVICES
Historical Values and Trend
1.85
1.8
1.75
1.7
1.65
1.6
1.55
1.5
1.45
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Historical
Trend

Our point of departure for measuring capital productivity trends in Bangladesh is the construction of time-series for sectoral capital stock, which are not available in published statistics. Estimates of nominal and real capital stock for three major sectors -- Agriculture, Industry and Services -- were computed employing a new methodology, described in Appendix E, based on the concept of the Cumulative Incremental Capital-Output Ratio (CICOR). Employing the estimated time-series for capital stock, sectoral and economy-wide rates of capital productivity were calculated, yielding the values summarized below:

Table 2.9

SECTORAL CAPITAL PRODUCTIVITY

	Capital Productivity Average Value FY73-FY88	Capital Productivity Average Annual Growth Rate FY73-FY88
Agriculture	0.6432	0.05%
Industry	0.1431	0.10%
Services	1.5052	-1.35%
Economy	0.5125	-0.12%

Relative values of average capital productivity among sectors are explained by low capital-output ratios in the Services sector, which includes Trade and Commerce, Financial and Social Services (Average value for K/Y of 0.676 for FY83-FY88); high capital-output ratios in the Industry sector, which includes Manufacturing, Energy and Construction (Average value for K/Y of 7.005 for FY83-FY88); and moderate capital-output ratios in Agriculture (Average value for K/Y of 1.624 for FY83-FY88). Overall trends in capital productivity for the economy as a whole are slightly negative, explained by the substantial decrease of the productivity of capital in the Services sector, which has declined at an average annual rate of -1.35 percent in the period FY73-FY88.

2.3.3 Capacity Utilization

Indices of capacity utilization provide measures of the intensity of actual output relative to potential output and are therefore important indicators of productive efficiency. Prolonged shortfalls of actual relative to potential output may be a symptom of inadequate effective demand. Employing our estimates for sectoral capital stock, we have constructed derived time-series of potential output for each of the three major sectors; indices of capacity utilization, shown in the table below, were calculated as the ratio of actual to potential product. For each sector, the year having least idle capacity has been arbitrarily assigned a capacity utilization base index value of 100.

Table 2.10

INDICES OF CAPACITY UTILIZATION FY73-FY88

Year	Economy	Agriculture	Industry	Services
FY73	85.0	85.0	68.3	86.3
FY74	91.5	91.9	73.4	92.6
FY75	92.5	90.8	100.0	88.8
FY76	100.0	100.0	98.2	98.3
FY77	97.8	95.8	99.9	100.0
FY78	88.8	92.7	75.2	89.6
FY79	83.8	86.0	74.5	86.4
FY80	84.2	91.2	70.9	84.4
FY81	95.0	98.0	93.1	97.6
FY82	90.4	94.9	89.9	88.8
FY83	88.8	95.2	85.7	84.2
FY84	89.8	94.4	90.0	84.8
FY85	89.2	92.1	91.5	84.2
FY86	89.8	93.4	89.7	83.3
FY87	89.4	91.6	91.4	82.8
FY88	87.6	89.2	91.3	81.4

As expected, fluctuations in the indices of capacity utilization bear close correlation with the intensity of damages during flood years. Persistent excesses of potential over actual output suggest the presence of an effective demand gap. Arguments to explain possible deficiencies in aggregate demand have usually centered on the recessive

Figure 2.9

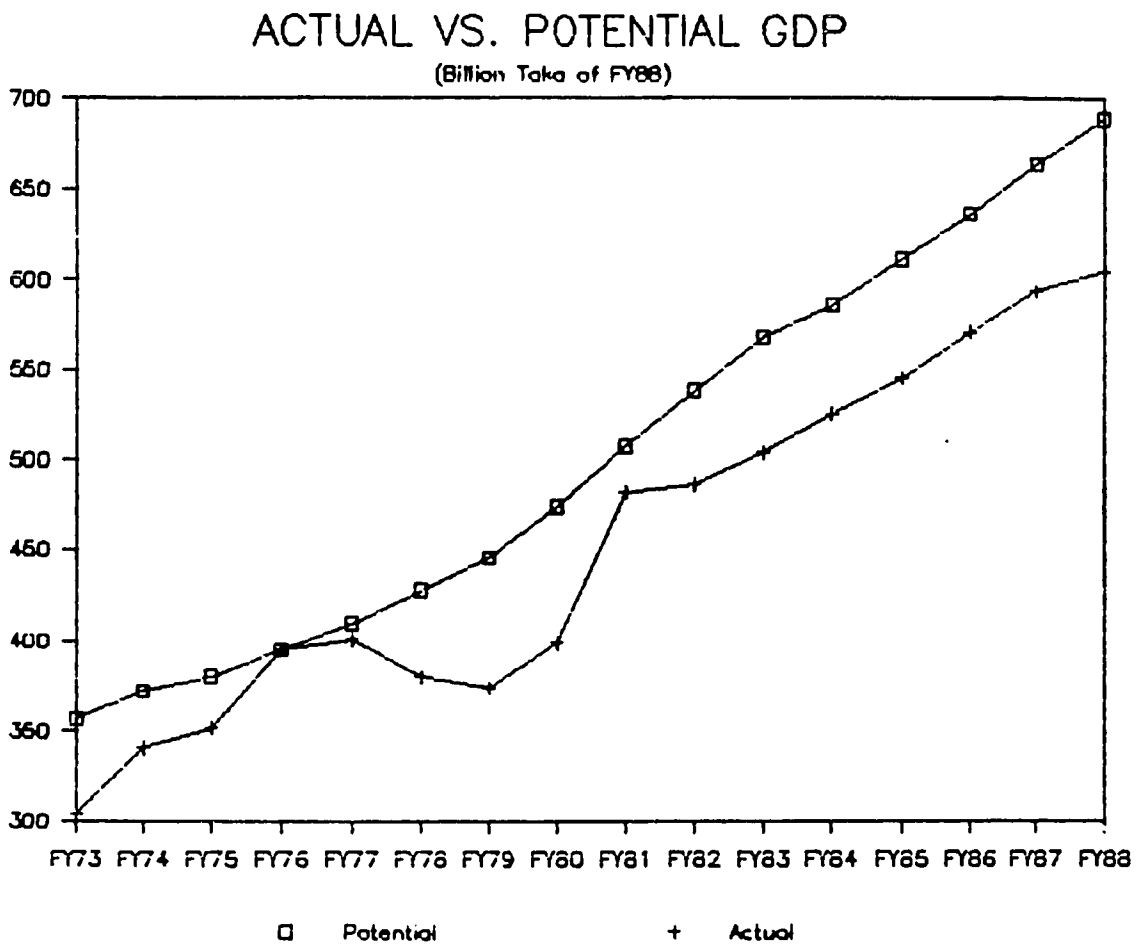

ACTUAL VS. POTENTIAL GDP
(Billion Taka of FY88)
700
650
600
550
500
450
400
360
300
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Potential
Actual

Figure 2.10

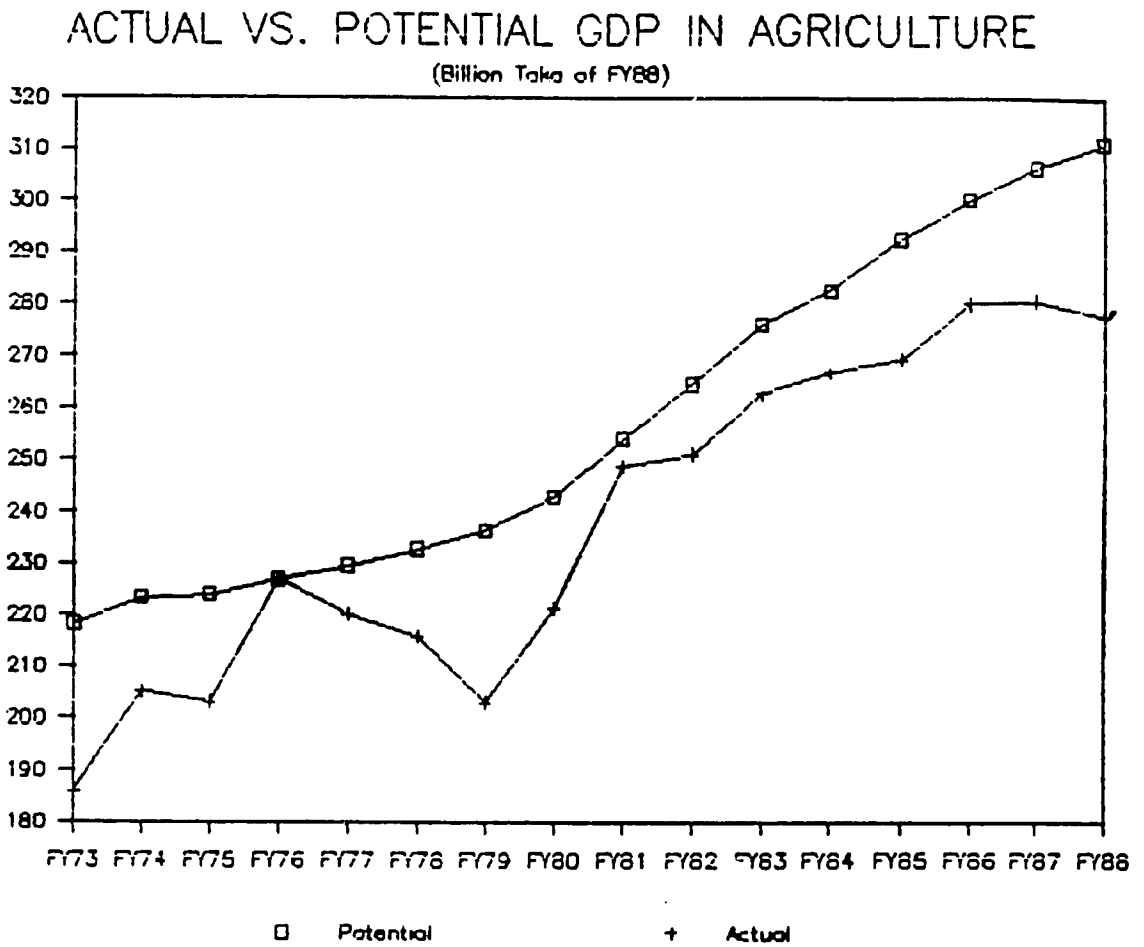

ACTUAL VS. POTENTIAL GDP IN AGRICULTURE
(Billion Taka of FY88)
320
310
300
290
280
270
260
250
240
230
220
210
200
190
180
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Potential
Actual

Figure 2.11

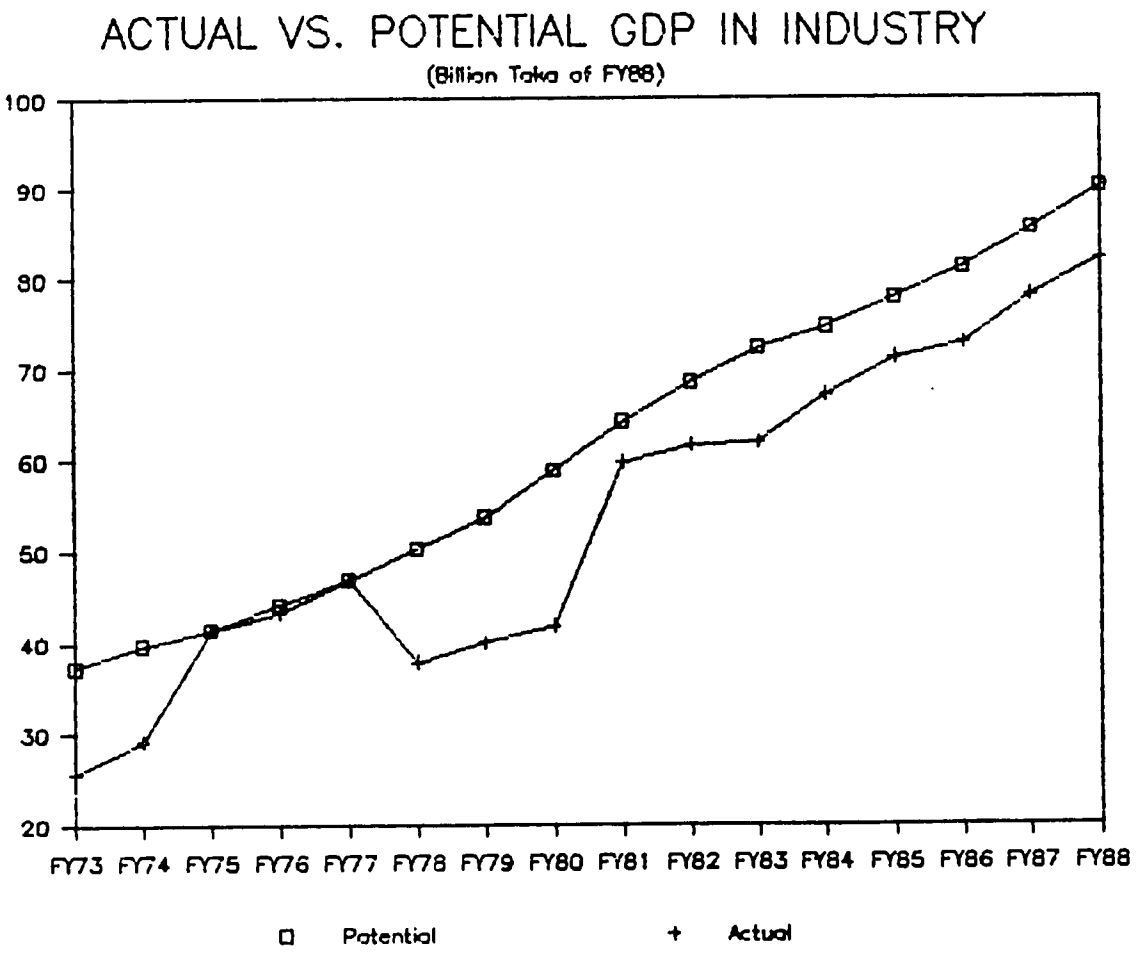
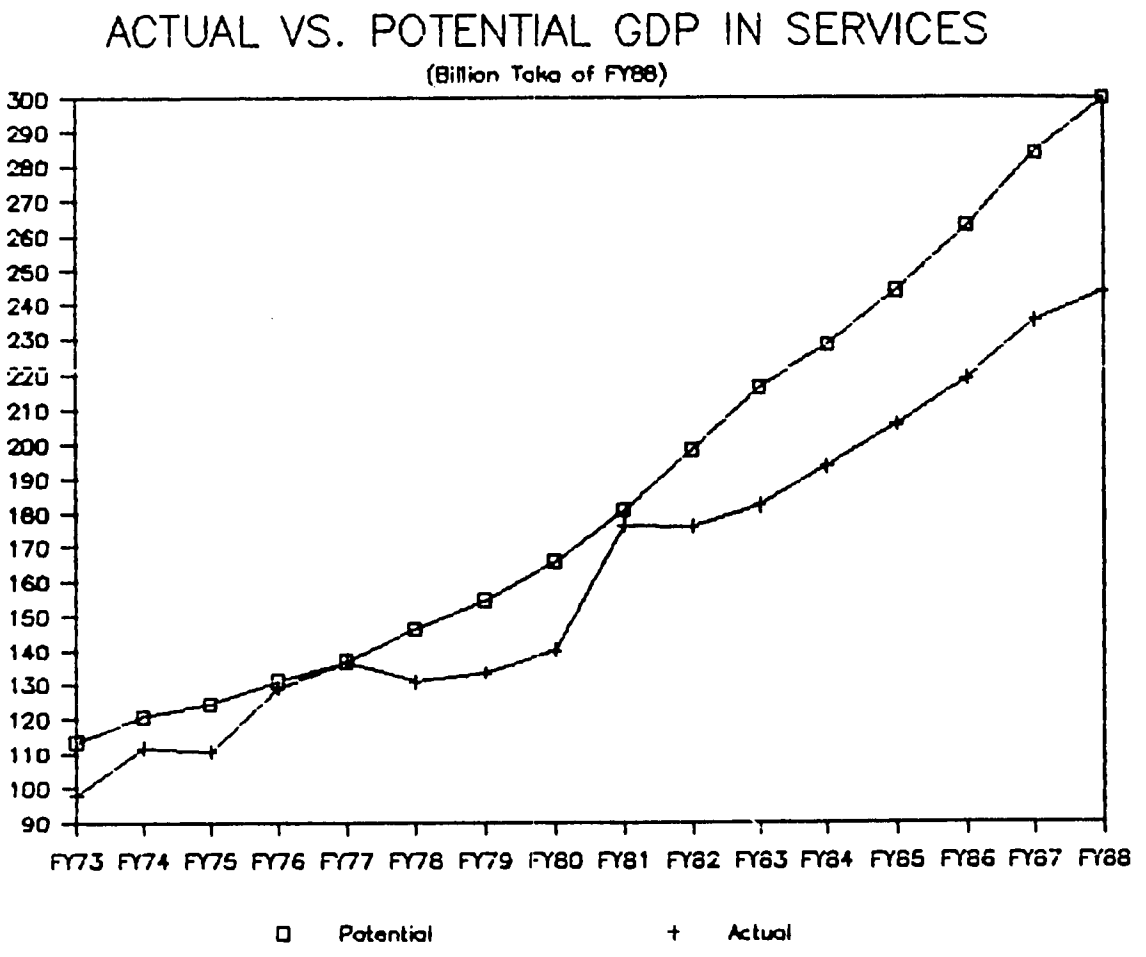

ACTUAL VS. POTENTIAL GDP IN INDUSTRY
(Billion Taka of FY88)
100
90
80
70
60
50
40
30
20
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Potential
Actual

Figure 2.12


ACTUAL VS. POTENTIAL GDP IN SERVICES
(Billion Taka of FY88)
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Potential
Actual

effects of weak average purchasing power stemming from both the low per capita levels of income and its highly regressive distribution. Compounding these effects is the presence, within gross domestic investment, of a significant imported component which acts as a leakage from domestic demand and depresses the expansive effect of investment expenditures as measured by the keynesian multiplier. Imports of capital goods averaged 38.1 percent of total investment expenditures for the period FY84-FY88, a sharp increase from the FY76-FY80 average of 28.1 percent.

2.3.4 Labor Productivity

In order to estimate trends in sectoral labor productivity, it was necessary to compute time series for sectoral labor inputs, which are not available in published statistics. Our point of departure for the estimation of sectoral labor inputs was the information on sectoral employment contained in the National Census for FY74 and in the Labor Force Surveys conducted by BBS for FY84, FY85 and FY86. From these discrete data points we constructed indices for sectoral man-years for the period FY73-FY88 employing estimates of implied product elasticities of demand for labor. The sectoral estimates for these elasticities were found to be 0.257 for Agriculture, 1.120 for Industry and 1.170 for Services. Employing the estimated time-series for sectoral labor inputs, sectoral and economy-wide rates of capital productivity were calculated, yielding the values summarized below:

Table 2.11

SECTORAL LABOR PRODUCTIVITY

	Labor Productivity Average Value	Labor Productivity Average Annual Growth Rate
Agriculture	1.9602	0.85%
Industry	2.7723	-0.30%
Services	4.4006	-0.40%
Economy	2.3227	-0.09%

Figure 2.13

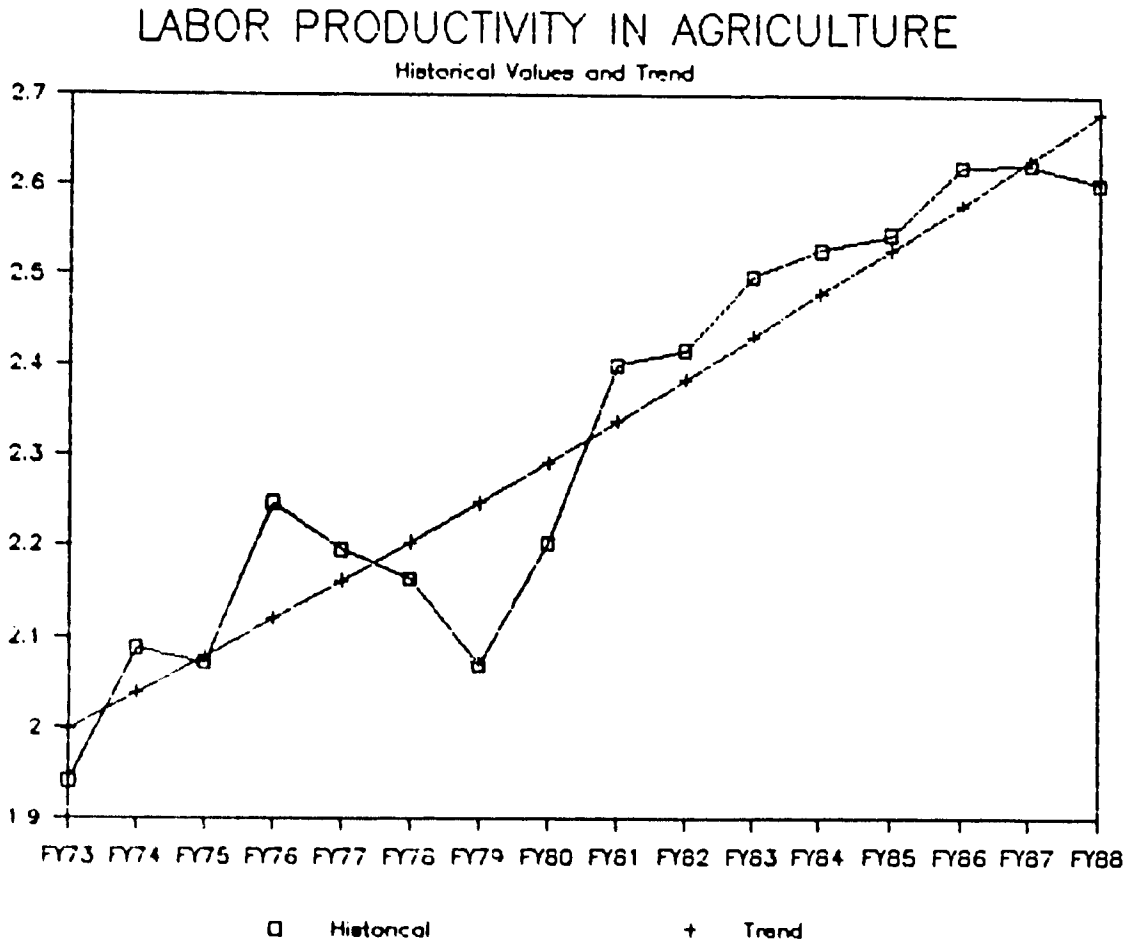

LABOR PRODUCTIVITY IN AGRICULTURE
Historical Values and Trend
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Historical
Trend

Figure 2.14

LABOR PRODUCTIVITY IN INDUSTRY

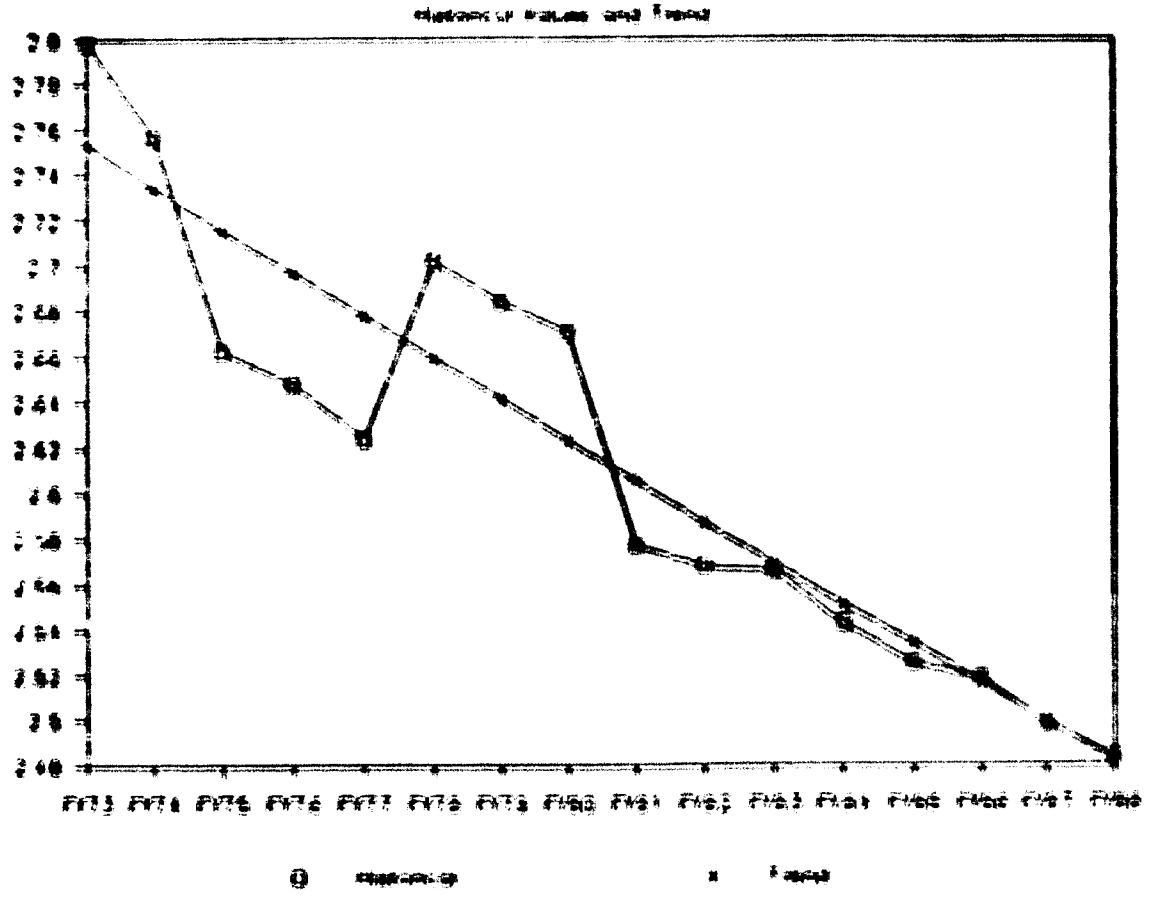
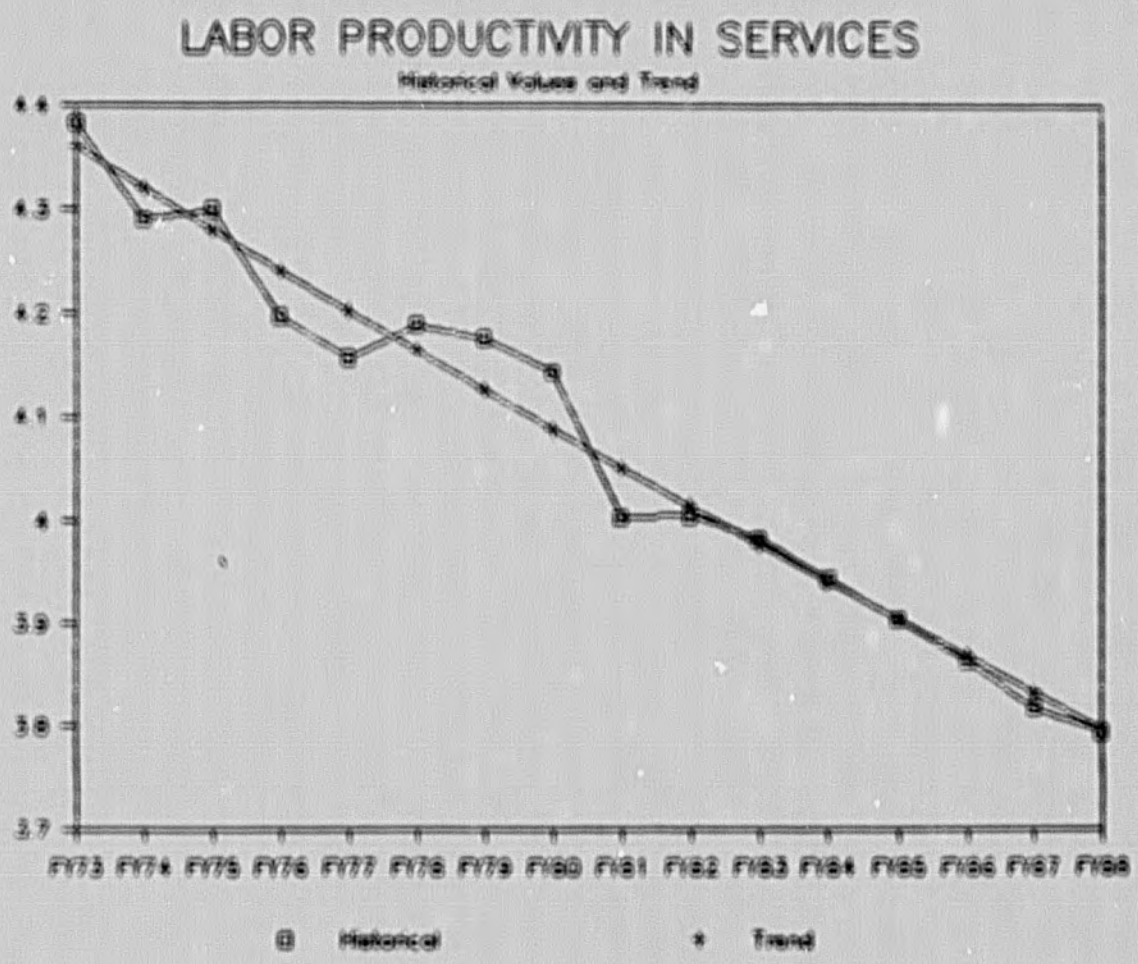


Figure 2.15


LABOR PRODUCTIVITY IN SERVICES
Historical Values and Trend
4.4
4.3
4.2
4.1
4
3.9
3.8
3.7
FY73 FY74 FY75 FY76 FY77 FY78 FY79 FY80 FY81 FY82 FY83 FY84 FY85 FY86 FY87 FY88
Historical
Trend

2.3.5 Income Distribution and Poverty

2.3.5.1 Income Distribution

Intertemporal comparisons of income distribution can be based on aggregate indices such as the Gini coefficient or on more disaggregated measures relating percentage shares of current income accruing to percentage shares of the population.

The Gini coefficient -- defined as the ratio of two areas in a diagram of the Lorenz income distribution curve -- attains the value 0 under total equality and the value 1 under total inequality. The evolution of this index for Bangladesh was computed by Rahman et al.[3] and is displayed below.

Table 2.12

GINI COEFFICIENT FOR CURRENT INCOME

	FY69	FY74	FY77	FY82	FY84
Bangladesh	0.29	0.36	0.45	0.39	0.35
Rural	0.27	0.36	0.44	0.36	0.35
Urban	0.37	0.38	0.51	0.42	0.35

As measured by the Gini ratio, marked deterioration in the equality of income distribution is apparent through FY77, followed by recovery up to the latest figures available in FY84. The deterioration of equality reached by FY77 appears more pronounced in the rural sector than in the urban sector when compared to the levels of FY69, but in absolute terms equality in FY77 remains greater in the rural sector as

[3]Rahman, A. et al., A Critical Review of the Poverty Situation in Bangladesh in the Eighties, Research Report Number 66, Volume I, Bangladesh Institute of Development Studies, Dhaka, 1988, p.6.

compared to the urban. The recovery from FY77 to FY84 is correspondingly more marked in the urban sector than that in the rural sector in both absolute and relative terms.

The degree of income inequality in Bangladesh, as measured by the Gini coefficient, falls roughly in the low to medium range of levels prevailing in a sample of LDCs in 1975:

Indonesia	0.46
Pakistan	0.38
India	0.42
Kenya	0.63
Philippines	0.49
Sri Lanka	0.35
Senegal	0.58
Egypt	0.43
Thailand	0.51
Taiwan	0.28
Brazil	0.57
Mexico	0.57

The trends discussed above, suggested by the evolution of the Gini coefficients for rural and urban income in Bangladesh, can be contrasted with changes registered in the patterns of income shares accruing to various percentiles of households as reported by Rahman et al.[4]:

Table 2.13

INCOME SHARES OF HOUSEHOLD PERCENTILE

		Lower 40%	Middle 40%	Upper 15%	Top 5%
Rural					
	FY69	23.6	39.4	23.9	13.1
	FY74	19.2	40.1	24.6	16.1
	FY77	18.3	39.0	25.4	17.3
	FY82	18.8	38.8	25.6	16.8
	FY84	19.2	38.2	24.5	18.1
Urban					
	FY69	19.2	34.9	25.3	20.6
	FY74	17.5	37.5	26.1	18.9
	FY77	15.4	32.8	22.5	29.3
	FY82	16.1	36.0	27.0	20.9
	FY84	18.9	40.1	26.4	14.6

[4] Rahman, A. et al., op. cit., p. 9.

The income share distribution appearing in this table for FY69 substantiates the hypothesis of greater equality in the rural sector relative to the urban sector, which was derived above on the basis of the Gini coefficients. Likewise, when compared with trends in the urban sector, the deterioration appears more pronounced by FY77 for the rural sector in relation to FY69, but attains lower absolute levels of inequality. The pattern of subsequent recoveries match those outlined above on the basis of the Gini coefficients. The sharp decline in the income share accruing to the top 5 percent of households registered between FY77 and FY84 for the urban sector is noteworthy. It has been suggested, however, that this outcome may reflect changes in sampling methodologies of the Household Expenditure Surveys or serious under-reporting of income by upper-bracket households [5].

2.3.5.2 Income Growth and Income Inequality

Efforts to establish a link between growth in per capita GDP and income inequality can be traced back to the pioneering work of Kuznets in 1954, who found evidence of "a long swing in the inequality characterizing the secular income structure: widening in the early phases of economic growth when the transition from the pre-industrial to the industrial civilization was most rapid, becoming stabilized for a while and then narrowing in the later phases."[6] He cited longitudinal and cross-sectional data in support of his hypothesis of an inverted U-shaped relationship between income inequality and per capita GDP. In 1973, Adelman and Morris, based on cross-section data from 44 LDCs concluded that "the relationship between level of economic development and the income share of the poorest 60 percent of the population is

[5] Rahman, A. et al., op. cit., p. 16.

[6] Kuznets, S., "Economic Growth and Income Inequality," American Economic Review 45, March 1955.

asymetrically U-shaped."[7] Ahluwalia,[8] Chenery and Syrquin,[9] and Paukert[10] also employed cross-section data and found that the income share of the bottom 60 percent of households declined as GDP per capita increased up to the $250-$300 range, and then increased when per capita GDP increased above that level. Absolute income of the lower fractiles of income recipients, however, was found by Ahluwalia to increase with per capita GDP at all stages of growth although they had lower elasticities, i.e., were less sensitive, with respect to increases in per capita GDP than the absolute income levels of the higher fractiles.

2.3.5.3 Poverty

Attempts to measure levels of poverty have given rise to two major classes of poverty indices:

- Head-count measures of poverty that begin by defining a poverty line in terms of nutritional intake levels --direct methods -- or food consumption expenditure levels -- indirect methods -- and attempt to estimate H, the fraction of the total population falling below the poverty line, with H=n/N, n=number of poor and N=total population.

- Distribution-sensitive measures that attempt to incorporate a desirable property absent in the head-count measures, namely, that the poverty index should increase as the inequality of distribution below the poverty line increases -- the head-count measures are entirely insensitive to improvement or deterioration of inequality within the segment of the population classified as poor. The class of distribution-sensitive indices,

[7] Adelman, I. and Morris, C.T., Economic Growth and Social Equity in Developing Countries, Stanford University Press, Stanford, 1973.

[8] Ahluwalia, M.S. "Inequality, Poverty and Development," Journal of Development Economics 3, December 1976.

[9] Chenery, H. and Syrquin, M., Patterns of Development 1950-1970, Oxford University Press, London, 1975.

[10] Paukert, F., "Income Distribution at Different Levels of Development: A Survey," International Labor Review 108, August 1973.

combining absolute and relative measures of poverty originated in the work of Sen.[11]

Intertemporal comparisons of poverty levels in Bangladesh can be attempted by relying on three sources: BBS,[12] IBRD[13] and the study conducted by Rahman et al. for BIDS.[14] Head-count measures of poverty for various years were computed in these studies and are displayed below.

Table 2.14

EVOLUTION OF POVERTY LEVELS--BBS

Population Shares below Poverty Lines

	Poverty Line I		Poverty Line II	
	Urban	Rural	Urban	Rural
FY74	80.0	82.0	49.0	57.0
FY82	63.0	69.0	27.0	43.0

Poverty Line I 2200 cals/day/person
Poverty Line II 1800 cals/day/person

[11] Sen, A.K., "Poverty: An Ordinal Approach to Measurement," Econometrics, March 1976.

[12] Bangladesh Bureau of Statistics, Socio-Economic Indicators of Bangladesh, Dhaka, 1986.

[13] International Bank for Reconstruction and Development, "Bangladesh: Promoting Higher Growth and Human Development" Report No. 6616-BD, Volume 1, Washington, D.C., 1987.

[14] Rahman, A. et al, op. cit., p. 23.

Table 2.15

EVOLUTION OF POVERTY LEVELS--IBRD

Population Shares below Poverty Lines

	Poverty Line I		Poverty Line II	
	Urban	Rural	Urban	Rural
FY74	81.4	82.9	28.6	44.3
FY82 (a)	69.0	90.0	30.7	66.0
FY82 (b)	66.0	73.8	30.7	52.2

Poverty Line I 2122 cals/day/person
Poverty Line II 1805 cals/day/person

(a) Based on consumption pattern of FY74 HES

(b) Based on consumption pattern of FY82 HES

Table 2.16

EVOLUTION OF POVERTY LEVELS--BIDS

Population Shares below Poverty Lines

	Poverty Line I		Poverty Line II	
	Urban	Rural	Urban	Rural
FY64	51.7	50.8	35.8	35.6
FY74	54.3	57.8	39.5	41.4
FY82	49.1	77.5	35.2	64.3
FY84	35.5	47.6	21.7	29.9

Poverty Line I 2200 cals/day/person
Poverty Line II 1800 cals/day/person

2.3.5.4 Analysis of Poverty Trends

Any analysis of poverty in Bangladesh must begin with the compelling fact that, under the most optimistic estimates by BIDS, fully 44 million people were absolutely poor in FY84 and 27 million were in extreme poverty. The IBRD estimates that the total number of poor increased from 67 million in FY82 to about 73 million in FY86.

Examination of the indices shown in the above tables indicates that rural poverty augmented between FY74 and FY82, with an apparent reversal of this trend between FY82 and FY84, as suggested by the BIDS study. Urban poverty, on the other hand, appears to have improved between FY74 and FY82, with this tendency continuing through FY84. The IBRD study suggests that, although the overall incidence of poverty declined from 82 percent to 73 percent between FY74 and FY82, that of extreme poverty increased from 43 percent to 50 percent. Additional evidence from nutritional micro-surveys suggests that while caloric intake may have declined only slightly, the overall nutritional quality of the poor deteriorated even further due to substitution of relatively inexpensive and calorie-rich foodgrains for higher-quality protein-intensive foods.

The deterioration in rural poverty between FY74 and FY82 can be attributed to several factors. First, real agricultural wages declined by 12 percent while real GDP per capita grew at 16 percent during the same period. Failure of moderate growth in agriculture to reach the poor directly is additionally explained by highly uneven patterns of land-ownership, aggravated by increasing landlessness as a result of distress sales -- in FY80, the top 2.2 percent of rural households controlled nearly 25 percent of all land and the top 8.5 percent controlled nearly 50 percent; in FY84, 11 percent of the land was in the hands of the top 0.8 percent. Moreover, by controlling tenancy, labour and credit markets, "large landowners gain considerable social and political powers which they may use to control Government and other channels for the distribution of rural development services even when these are supposedly targeted to the poor; unequal distribution of agricultural income is inherent in the pattern of land distribution and in the operation of agrarian markets" (Hossain[15]).

Improvements in rural poverty between FY82 and FY86 can be explained, among other factors, by a sharp increase in real agricultural wages, which rose 36 percent during the

[15] Hossain, M., Agricultural Growth Linkages -- the Bangladesh Case, Bangladesh Development Studies, Dhaka, March 1988.

period and in overall increases in the share of wage income as a percentage of total rural income. In the face of continued increases in unemployment and underemployment levels, this sharp rise in real wages can be explained only in part by increases in labor demand owing to more labor-intensive practices and to a reduction of overall supply due to rural-urban migration: it must be assumed that the rural labor market is highly segmented with a substantial portion of allocations guided by non-price rationing. Overall improvements in rural poverty are also attributable to sharp increases in the Food-for-Work program for which wheat allocations increased from 372,000 tons in FY82 to 500,000 tons in FY86, implying the creation of 38 million days of work. The Vulnerable Group Feeding Program increased from 39,000 tons in FY82 to 172,000 tons in FY86, implying 55 million new workdays.

In the urban sector, deterioration of inequality in the period FY74-FY77 originated in heightened scarcity rents flowing from pricing and distribution strategies of state enterprises and were captured by licensed trading intermediaries.[16] Subsequent improvements arose from the attenuation of capital income inequality following privatization of nationalized industries and expansion of the urban informal sector which accompanied the increased flow of rural migrants to urban centers.

Despite the indications of continued improvements in poverty levels after FY82 as measured by caloric intake, there is evidence pointing to a continued deterioration of the quality of the diet among the poor. Prices of protein-rich foods relative to foodgrains have continued to increase and the per capita availability of pulses, fish, chicken and eggs has apparently decreased (IBRD [17]).

Between FY86 and FY88, the improving trend in real agricultural wages was reversed -- they showed a decline of 11.7 percent during the last two years. Combined with

[16] Rahman, A. et al, op. cit., p. 8.

[17] International Bank for Reconstruction and Development, op. cit.

declining growth in agriculture and the negative direct effects of the floods on the poor, this points to a worsening in poverty indicators since FY86.

2.4 Strategic Options

2.4.1 Perspectives on Development Policy

Among the many impediments confronting Bangladesh in attempting to surmount the backwardness and misery that afflict most of its inhabitants -- which are natural in origin and which, man-made?

Gerald Meier has remarked that, while in 1964 Professor Ragnar Nurske could observe that "a country is poor because it is poor", many would now contend -- after an additional quarter century of development experience -- that "a country is poor because of poor policies."[18]

Not alone among the nations of south-central Asia, Bangladesh, the **Land of Bengal**, is a poor country in need of good policies effectively implemented. Devising such policies -- whether aimed at stabilization in the short-term, structural adjustment in the medium-term, growth in the long-term or development in the not easily foreseeable future -- requires more than mere adherence to the comfortable logic of the economic calculus. Economic realities, repeatedly and stubbornly, resist conforming to the precepts and blueprints emanating from handbooks and manuals. Whereas a commercial banker may profitably appraise a country by coldly distilling ciphers from a page of printed statistics, policy-makers and promotors of development will risk low returns to investment by neglecting carefully to consider the contextual idiosyncrasies of concrete sociocultural settings. These frequently define the gap between promise and performance in policies which may be conceptually sound but which are ineffectively implemented. The historiography of development programs is

[18] Meier, G., Leading Issues in Economic Development, Fifth Edition, Oxford University, 1989.

paved, like Dante's Inferno, with ill-fated good intentions that ignored the singularities of political economy.

Yet, as has been pointed up in strategy formulation documents by USAID/Bangladesh, overall progress in development efforts is likely to be slow at best, given the staggering dimensions of obstacles whose gestation periods can be measured in decades and, sometimes, centuries. Meaningful action plans must therefore continue to seek a balance between the phasing of initiatives and interventions whose returns are likely to be rapid and those with payoffs requiring lengthy maturation.

In examining the outcomes of recent policies, in assessing the adequacy of past strategies, and in evaluating the range of options for future action, it is important to discriminate between barriers that are technological or resource-based, and those that are institutional in nature.

2.4.2 Low Level Equilibrium

The stagnation quagmire which typifies the condition of the economy of Bangladesh since the country's republican birth, has been described, in a particularly apt phrase, as a state of **low-level equilibrium**. This description encloses two ideas. The first one concerns the effective poverty level of much of its population and is amply supported by widely disseminated indices on average caloric intake, infant mortality and morbidity, heavily skewed distributions of income and wealth, limited access to electricity, sanitation and housing, and other indicators of physical quality of life -- or lack thereof. Not more than a handful among the world's nations share comparable burdens and despite the less than perfect reliability of the pertinent statistics, it can be stated with small likelihood of error that these measures of misery have remained largely undiminished. The second idea stored inside the phrase is concealed behind the notion of equilibrium. It suggests that given the malignant steadiness underlying the economy's poverty indicators, no significant redirectioning of development performance will come

about without the influence of exogenous impulses that are powerful and benign or of realignments from within that are structural in nature. Simply stated, more of the same will yield more of the same.

2.4.3 A False Dichotomy: High Growth vs. Entitlements

Even as distinguished a development economist as Jagdish Baghwati has recently made a contribution[19] towards perpetuating the myth that, in formulating development strategies, the choice has to be made between, on the one hand, a path emphasizing high growth and, on the other hand, a path stressing income transfers or entitlements. This is not, and never has been, a meaningful choice. If development is understood, as it properly should be, as a process of equitable and sustainable growth, it becomes clear that its underpinnings cannot rest on income transfers. The need for entitlement programs or income transfers as instruments for providing transitory relief aid or for erecting a safety net for the underprivileged segments of any society is well established -- even among advanced industrialized nations. But, in formulating strategies for development, the meaningful choices consist of choices amongst alternative modes of growth -- the only meaningful question therefore concerns the kind of growth that is needed. The building-blocks for decision-making here lie of course in the familiar binary poles of export growth vs. import substitution, consumption vs. investment, rural vs. urban, labor-intensive vs. capital-intensive, and the continuous ranges lying in-between.

The high-growth option, therefore, need not be interpreted as an encoded form for the "trickle-down" approach to economic development -- understood as a laisser faire prescription for economic growth and a benign neglect attitude towards poverty alleviation. Regarding the latter, it is sufficient to refer to the views of John R.

[19] Baghwati, J., "Poverty and Development", World Development, September 1988.

Westley, formerly mission Director of USAID/Bangladesh, who wrote in 1986:[20]

> "Western development theories of the 1950s and 1960s generally predicted that the benefits of growth would trickle-down to the poorer strata of population relatively quickly in the development process. However, analysis of the available data from the 1950s and 1960s has indicated that income inequality and unemployment have often increased with increases in per capita GNP. Some data have supported the stronger conclusion that the poorest 40 to 60 percent of the population have become absolutely, as well as relatively, worse off in most developing countries, i.e. the real incomes of the poor have declined, or the percentage of the population below some poverty line has increased."

2.4.4 Trade-Offs between Growth and Employment

In economic development, employment growth fulfills a role which is at least as important, and frequently more so, than output growth. In the short-run, with a given profile of installed capital stock, there is little scope for choice of techniques and to maximize output implies employment maximization. But in the medium- and long-term, a policy which aims to maximize output growth may not be optimal from the standpoint of achieving the greatest possible increase in employment levels. This is because the techniques leading to maximum output growth may be more capital-intensive and require higher capital-labor ratios than other available technological options. A capital-scarce country such as Bangladesh calls for the promotion of productive technologies which are capital-saving and labor-using. The implications of the above from the standpoint of development policy is that special efforts should be undertaken to promote research and development of appropriate technologies that are labor-using and capital-saving. This area merits particular emphasis, given that most research and development activities, whether deliberately or not, are conducted in search of capital-intensive technologies.

[20] Westley, J.R., Agriculture and Equitable Growth, Westview Press, Boulder, Colorado, 1986.

2.4.5 Constraints to Development

Constraints to economic development in Bangladesh can be broadly classified into resource constraints and sociopolitical constraints.

Resource Constraints

- Human Resources
  - Low literacy levels
  - Exports of skilled/semi-skilled classes
  - Small managerial classes
  - High population density
  - High population growth
- Poor infrastructure
- Difficult topography
- Recurring floods and droughts

Sociopolitical Constraints

- Rent-seeking urban elites
- Conservative rural elites
- Elitist government preserves influence networks promoting corrupt practices
- Recurring labor unrest

Resource constraints act primarily by limiting feasible paths for economic expansion and thus condition the options for development:

- Poor infrastructure, low skill levels and labor unrest limit the attractiveness of foreign investment
- Lack of managerial classes limits options for industrial expansion and export growth
- Floods and droughts limit options for agricultural growth

Sociopolitical constraints limit the effectiveness of policy instruments in achieving stated obejctives:

- Influence networks between urban elites and government limit payoffs to privatization
- Coalition between elites and government limits options for literacy campaigns and support for elementary education
- Potential effectiveness of reforms in financial policies seriously constrained by corrupt practices in loan selection
- Efficiency of aid delivery limited by corrupt practices to an undetermined degree
- Income concentration stemming from concentrated land ownership sharply limts indirect linkage benefits of agricultural growth
- Rural elite and government coalitions effectively eliminate options for asset redistribution.

3. SCENARIOS FOR GROWTH: PROJECTIONS THROUGH FY2000

3.1 Projection Methodology

Our objective in constructing projections of the Bangladesh economy for the period FY1989 through FY2000 is to portray credible scenarios of the likely evolution of key macroeconomic aggregates under alternative assumptions about policy and exogenous variables. Macroeconometric models are useful in constructing forecasts because they permit rapid evaluation of policy changes and they ensure internal consistency among the various magnitudes projected. While it was not the purpose of our projection exercise to construct a macroeconometric model, we have, nonetheless, retained the emphasis on ensuring overall internal consistency among forecast variables within each postulated scenario.

Overall macroeconomic balance is enforced by means of the equality between overall savings and overall investment. When examining historical data, this equality is fulfilled inexorably, given that, ex-post, savings and investment flows become identical by virtue of national accounting conventions. On the other hand, when dealing with forecast or ex-ante values, the equality between savings and investment becomes an equilibrium condition which is not guaranteed to hold and which, in effect, serves to discriminate the feasible paths from the unfeasible. Whereas these notions are prominently displayed in introductory textbooks, it is all too common to encounter macroeconomic forecasts in which production, trade and fiscal variables are projected independently and in which no provisions are taken to ensure overall consistency. It is as if a financial analyst, accustomed to examining balance sheets where total equity and liabilities exactly add up to total assets, sets out to project debits and credits independently: only by sheer accident would he encounter a feasible projection.

In open economies, the sources of savings flows are domestic savings, consisting of savings of the private sector and savings of the public sector, net remittances from

abroad, or factor payments, and foreign savings, equal to the current account deficit. Thus, the equality between savings and investment takes the form:

$$GDI = SPR + REM + SPU + SFO \quad (1)$$

GDI - Gross domestic investment
SPR - Domestics savings of the private sector
REM - Remittances from abroad
SPU - Savings of the public sector
SFO - Foreign savings

When imports exceed exports and there is a current account deficit, there must be a net inflow of borrowings from abroad -- or foreign savings -- to counterbalance the deficit; similarly, when exports exceed imports and the current account is in surplus, there is a net outflow of borrowings or negative foreign savings. Our approach to ensuring consistency of the macroeconomic projections is based on the **flow equilibrium** equation (1).

While satisfying the flow equilibrium equation ensures consistency at each point in time or **static feasibility**, **dynamic feasibility** throughout the projected trajectory requires consideration of a **stock equilibrium** condition involving the capital account and the overall balance of payments. It is precisely through the stock equilibrium condition that an assessment can be made of capital inflows, such as foreign aid, required to guarantee dynamic feasibility along the forecast path.

The sequence of steps that were followed in constructing the forecast scenarios are the following:

Step 1: We begin by constructing indices of real potential GDP throughout the projection period for each of the three sectors considered: Agriculture, Industry and Services. Using forecasts of capacity utilization rates for each sector, we construct projections of real actual GDP for each sector.

Step 2: From real potential $\bar{GDP}$ we construct the corresponding forecasts for sectoral capital stock employing the appropriate capital-output ratios. From the time-paths for sectoral capital stock we derive net investment requirements for each sector. Given assumptions about sectoral depreciation rates, we construct time-series of gross investment requirements for each sector and for the economy as a whole.

Step 3: We construct projections for the key components of the government budget and the derived estimates of public savings.

Step 4: We construct projections for private domestic savings and for net remittances from abroad.

Step 5: We construct projections for exports and imports of commodities and services and for the current account.

Step 6: Using the projections for private savings found in Step 4, the projections for public savings found in Step 3, and the projections for gross domestic investment found in Step 2, we compute the requirements for foreign savings by employing the flow-equilibrium equation.

Step 7: We construct forecasts of the real exchange rate throughout the projection period. Employing the real exchange rate as a conversion factor, we compare the values of the foreign savings requirement in Step 6 with the current account balance found in Step 5. Adjusting for the resulting disequilibrium--accidental balance would be rare -- involves a choice between (1) changing the import/export ratio suitably to modify the current account balance, or (2) changing the revenue/expenditure ratio on the government side, so as to affect the level of public savings. An appropriate mix of these adjustments is conducted until the savings- investment balance is achieved throughout the projection period, thus ensuring static feasibility of the forecast trajectory.

Step 8 Achievement of the savings-investment balance assures static feasibility of the projections but does not guarantee the satisfaction of stock-equilibrium which is an additionally required condition for a trajectory to be feasible. Stock disequilibrium may occur, for example, when sustained

current account deficits lead to unacceptable accumulations of foreign debt or to unacceptable draw-downs in the level of international reserves. In such an instance, new adjustments may become necessary to ensure flow-equilibrium at lower levels of the current account deficit. We construct projections of the capital account, including flows of foreign aid, and of the balance of payments. We compute the evolution of the level of international reserves throughout the projection period employing the reference level at the beginning of the forecast period, and the projected values for the balance of payments. If the level of international reserves behaves adequately, the forecast trajectory is accepted. Otherwise, there is the choice of (i) making adjustments to the capital flows projections or (ii) recalculating the current account balance and flow-equilibrium conditions, as described above.

3.2 Description of Scenarios

We have constructed two alternative sets of projections corresponding to Low-Growth and High-Growth scenarios. The Low-Growth scenario is based on overall growth rates consistent with trends in sectoral performance throughout the last decade. The specific assumptions underlying each scenario, and the corresponding projections, are described below.

3.2.1 Scenario A: Low Growth

The projections for actual real output through FY2000 are presented in Table 3.1. Average annual growth rates for the projection period are 2.2 percent for Agriculture, 4.5 percent for Industry and 4.8 percent for Services, consistent with output performance recorded during the last decade. Growth rates for overall GDP average 3.8 percent under the low-growth scenario.

Projections for current account variables were constructed and are summarized in Table 3.4. Traditional merchandise exports were assumed to increase at

an annual rate of 0.4 percent and non-traditional exports at 6.4 percent. Merchandise imports were assumed to increase at an average annual rate of 2.4 percent throughout the projection period--with an implied income- elasticity of demand for imports of 0.63. Remittances were assumed to grow at an average rate of 2.6 percent, somewhat below the historical growth rates. Deficits on current account are shown to increase from 1098 million dollars in FY89 to 1693 million dollars in FY2000. Projections of public savings were first constructed, as shown in Table 3.2, under the assumption of annual 3.8 percent growth in government revenues from tax and non-tax sources, -1.0 percent growth in transfer payments and 8.0 percent annual growth rates in real government consumption, values near realized performance over the last decade. Projections of the government revenue and development budget employed in estimating the flow of public savings are presented in Table 3.5.

Under the above set of assumptions, as is shown in Table 3.2, aggregate savings and aggregate investment are not in equilibrium: foreign savings requirements exceed the current account deficit and this discrepancy increases throughout the projection period. As discussed above, there are various alternatives for adjusting towards equilibrium. We chose to ensure savings-investment balance by lowering the projected growth rate of government consumption expenditures from 8.0 percent to approximately 6.0 percent per annum in order to reduce the absolute value of--negative --public savings and thus the requirements for foreign savings. The adjusted figures, showing overall savings-investment balance, are displayed in Table 3.3.

Implications of the projected trajectories from the standpoint of the evolution of international reserves are displayed in Table 3.4. It can be seen that, with aid disbursements growing at 0.43 percent per year in real terms, there is a surplus in the balance of payments through FY96, after which a deficit results, causing international reserves to start declining. Therefore, adjustments would be required in the level of aid disbursements or in the current account deficit in order for this scenario to be sustainable in the long-term.

TABLE 3.1

SCENARIO A: LOW GROWTH -- PROJECTIONS OF REAL ACTUAL AND REAL POTENTIAL GDP BY SECTORS
(Million Taka of FY88 and Annual Percentages)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
Agriculture												
Actual GDP	287732.5	296337.2	305513.2	314610.2	323959.6	331086.7	338370.6	345814.8	353422.7	361198.0	369144.4	377265.5
Growth Rate		3.0	3.1	3.0	3.0	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Potential GDP	317936.5	324931.1	332079.6	339385.4	346851.8	354482.6	362281.2	370251.4	378396.9	386721.6	395229.5	403924.6
Growth Rate		2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Industry												
Actual GDP	86223.7	89979.9	94208.9	98636.7	103272.7	108126.5	113208.4	118529.2	124100.1	129932.8	136039.6	142433.5
Growth Rate		4.4	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Potential GDP	94336.6	98770.4	103412.6	108273.0	113361.9	118689.9	124268.3	130108.9	136224.0	142626.6	149330.0	156348.5
Growth Rate		4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Services												
Actual GDP	256616.1	269446.9	282919.2	297065.2	311918.5	327514.4	343890.1	361084.6	379138.8	398095.8	418000.6	438900.6
Growth Rate		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Potential GDP	314866.4	330609.7	347140.2	364497.2	382722.0	401858.1	421951.0	443048.6	465201.0	488461.1	512884.1	538528.3
Growth Rate		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Economy												
Actual GDP	630572.3	655763.9	682641.4	710312.2	739150.7	766727.6	795469.2	825428.6	856661.6	889226.6	923184.6	958599.6
Growth Rate		4.0	4.1	4.1	4.1	3.7	3.7	3.8	3.8	3.8	3.8	3.8
Potential GDP	727139.5	754311.2	782632.4	812155.6	842935.7	875030.6	908500.5	943408.9	979822.0	1017809.3	1057443.7	1098801.4
Growth Rate		3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.9

TABLE 3.2

EX-ANTE SAVINGS-INVESTMENT DISEQUILIBRIUM--EXTRAPOLATION of PAST TRENDS
(Million Taka and Million Dollars of FY88)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
(1) Real Gross Investment	74477.2	76684.7	81046.0	84569.0	88262.0	92133.0	96193.0	100451.1	104917.4	109602.3	114517.8	119675.7
(2) Gross National Savings	37054.6	36672.6	36153.3	35409.1	34442.9	33051.0	31382.0	29409.1	27102.8	24431.4	21360.3	17852.0
Gross Private Savings	50445.8	51738.6	53064.6	54424.6	55819.5	57250.1	58717.4	60222.3	61765.9	63349.0	64972.6	66638.0
Domestic Savings	24950.3	25576.0	26217.5	26875.0	27549.0	28239.9	28948.2	29674.2	30418.4	31181.3	31963.4	32765.0
Remittances	25495.5	26162.6	26847.2	27549.6	28270.5	29010.2	29769.2	30548.1	31347.4	32167.6	33009.3	33873.0
Gross Public Savings	-13391.2	-15066.0	-16911.3	-19015.5	-21376.6	-24199.1	-27335.4	-30813.3	-34663.1	-38917.6	-43612.3	-48786.0
Govt. Revenue	46031.6	47870.8	49832.8	51852.8	53958.0	55971.1	58069.2	60256.3	62536.3	64913.5	67392.5	69977.8
Govt. Consumption	45645.1	49296.7	53240.5	57499.7	62099.7	67067.7	72433.1	78227.7	84485.9	91244.8	98544.4	106427.9
Transfer Payments	13777.8	13640.1	13503.7	13368.6	13234.9	13102.6	12971.6	12841.8	12713.4	12586.3	12460.4	12335.8
(3) Foreign Saving Requirement	37422.6	40012.1	44892.7	49159.9	53819.1	59082.0	64811.0	71042.0	77814.6	85170.9	93157.5	101823.7
(4) Real Exchange Rate	31.7	32.2	32.7	33.2	33.7	34.2	34.7	35.2	35.7	36.3	36.8	37.4
(5) Foreign Saving Requirement $	1179.8	1242.8	1373.8	1482.2	1598.7	1729.1	1868.7	2018.1	2177.8	2348.4	2530.7	2725.3
(6) Current Account Balance $	-1098.7	-1159.1	-1200.8	-1240.6	-1273.2	-1318.3	-1367.1	-1418.6	-1477.3	-1541.4	-1613.0	-1692.7
(7) S-I Balance	81.1	83.8	173.0	241.6	325.5	410.8	501.6	598.5	700.4	807.0	917.8	1032.5

Note: (3) = (1) - (2)
(5) = (3) x (4)
(7) = (5) - (6)

TABLE 3.3

SCENARIO A: LOW GROWTH -- SAVINGS-INVESTMENT BALANCE
(Million Taka and Million Dollars of FY88)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
(1) Real Gross Investment	74477.2	76684.7	81046.1	84569.2	88262.0	92133.1	96193.4	100451.1	104917.4	109602.3	114517.8	119675.7
(2) Gross National Savings	39627.9	39369.2	41806.9	43421.9	45400.6	47086.4	48777.3	50478.0	52130.5	53699.0	55143.5	56429.5
Gross Private Savings	50445.8	51738.6	53064.6	54424.6	55819.5	57250.1	58717.4	60222.3	61765.9	63349.0	64972.6	66638.0
Domestic Savings	24950.3	25576.0	26217.5	26875.0	27549.0	28239.9	28948.2	29674.2	30418.4	31181.3	31963.4	32765.0
Remittances	25495.5	26162.6	26847.2	27549.6	28270.5	29010.2	29769.2	30548.1	31347.4	32167.6	33009.3	33873.0
Gross Public Savings	-10817.9	-12369.4	-11257.7	-11002.7	-10418.8	-10163.7	-9940.1	-9744.3	-9635.3	-9649.9	-9829.1	-10208.4
Govt. Revenue	46031.8	47870.8	49832.8	51852.8	53958.0	55971.1	58069.2	60256.3	62536.3	64913.5	67392.5	69977.8
Govt. Consumption	43071.8	46600.1	47586.9	49486.9	51141.9	53032.2	55037.8	57158.8	59458.2	61977.2	64761.2	67850.4
Transfer Payments	13777.8	13640.1	13503.7	13368.6	13234.9	13102.6	12971.6	12841.8	12713.4	12586.3	12460.4	12335.8
(3) Foreign Saving Requirement	34849.3	37315.5	39239.2	41147.3	42861.4	45046.7	47416.1	49973.1	52786.9	55903.3	59374.3	63246.2
(4) Real Exchange Rate	31.7	32.2	32.7	33.2	33.7	34.2	34.7	35.2	35.7	36.3	36.8	37.4
(5) Foreign Saving Requirement $	1098.7	1159.1	1200.8	1240.6	1273.2	1318.3	1367.1	1419.6	1477.3	1541.4	1613.0	1692.7
(6) Current Account Balance $	-1098.7	-1159.1	-1200.8	-1240.6	-1273.2	-1318.3	-1367.1	-1419.6	-1477.3	-1541.4	-1613.0	-1692.7
(7) S-I Balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: (3) = (1) - (2)
(5) = (3) x (4)
(7) = (5) - (6)

TABLE 3.4

SCENARIO A: LOW GROWTH -- PROJECTIONS OF BALANCE OF PAYMENTS
(Million US Dollars of FY88)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
(1) CURRENT ACCOUNT												
Merchandise Exports	1286.6	1330.2	1376.4	1425.5	1477.5	1532.7	1591.2	1653.3	1719.2	1789.2	1863.4	1942.2
Traditional	641.2	643.7	646.3	648.8	651.3	653.8	656.4	659.0	661.5	664.1	666.7	669.3
Nontraditional	645.4	686.5	730.2	776.7	826.2	878.8	934.8	994.3	1057.7	1125.1	1196.7	1273.0
Merchandise Imports	-3026.7	-3096.3	-3167.5	-3240.4	-3314.9	-3391.2	-3469.2	-3548.9	-3630.6	-3714.1	-3799.5	-3886.9
Interest on Public Debt	-127.9	-135.3	-143.4	-154.8	-170.3	-187.3	-206.0	-226.6	-249.3	-274.2	-301.6	-331.8
Remittances	803.8	812.6	821.6	830.6	839.8	849.0	858.3	867.8	877.3	887.0	896.7	906.6
Others	-34.5	-70.3	-87.9	-101.5	-105.2	-121.5	-141.5	-165.1	-194.0	-229.3	-272.0	-322.9
Balance	-1098.7	-1159.1	-1200.8	-1240.6	-1273.2	-1318.3	-1367.1	-1419.6	-1477.3	-1541.4	-1613.0	-1692.7
(2) CAPITAL ACCOUNT												
Aid Disbursements	1656.4	1672.9	1690.0	1706.5	1723.6	1740.9	1758.3	1775.9	1793.6	1811.6	1829.7	1848.0
Project Aid	1225.7	1238.1	1250.6	1237.3	1249.0	1270.7	1248.5	1278.7	1264.5	1286.2	1271.7	1293.6
Commodity Aid	248.5	250.9	253.5	273.0	275.8	313.4	351.6	355.2	394.6	398.6	439.1	443.5
Food Aid	182.2	183.9	185.9	196.2	198.8	156.8	158.2	142.0	134.5	126.8	118.9	110.9
Amortization of Public Debt	-179.3	-193.6	-209.1	-225.8	-243.9	-263.4	-284.5	-307.3	-331.8	-358.4	-387.0	-418.0
Others	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0
Balance	1407.1	1409.3	1410.9	1410.7	1409.7	1407.5	1403.8	1398.6	1391.8	1383.2	1372.7	1360.0
(3) BALANCE OF PAYMENTS	308.4	250.2	210.1	170.1	136.5	89.2	36.7	-21.0	-85.5	-158.2	-240.3	-332.7
(4) GROSS RESERVES	1204.4	1454.6	1664.7	1834.9	1971.4	2060.6	2097.3	2076.3	1990.7	1832.5	1592.2	1259.5

Note: (3) = (1) + (2)

TABLE 3.5

SCENARIO A: LOW GROWTH -- PROJECTIONS OF GOVERMENT BUDGET AND PUBLIC SAVINGS
(Million Taka of FY88)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
(1) REVENUE BUDGET												
Income	46031.8	47870.8	49832.6	51852.8	53958.0	55971.1	58069.2	60256.3	62536.3	64913.5	67392.5	69977.8
Tax Income	37834.3	39345.8	40958.5	42618.7	44349.0	46003.7	47728.1	49525.7	51399.7	53353.6	55391.1	57516.0
Non-tax Income	8197.4	8524.9	8874.3	9234.1	9609.0	9967.5	10341.1	10730.6	11136.6	11559.9	12001.4	12461.8
Expenditure	47121.3	50221.1	51032.4	52664.4	54077.7	55701.5	57432.0	59268.0	61265.4	63462.3	65895.3	68604.9
Consumption	38764.6	41940.1	42828.2	44538.2	46027.7	47729.0	49534.0	51442.9	53512.4	55779.5	58285.1	61065.4
Transfer Payments	8266.7	8184.0	8102.2	8021.2	7941.0	7861.5	7782.9	7705.1	7628.1	7551.8	7476.3	7401.5
Others	90.0	97.0	102.0	105.0	109.0	111.0	115.0	120.0	125.0	131.0	134.0	138.0
(2) DEVELOPMENT BUDGET												
Expenditure	42366.6	44067.1	43631.0	45277.4	47075.5	46548.4	48357.4	48582.4	50450.1	52384.2	54383.8	56454.4
Expenditure Net of Consumption & Transfer	32548.3	33951.1	33470.9	34981.3	36667.3	36004.1	37665.0	37729.8	39419.0	41152.0	42923.5	44735.0
Agriculture	7159.9	7469.1	9997.4	10428.9	10909.8	10741.2	11225.4	12251.2	12788.5	13343.2	13913.7	14499.6
Industry	13018.5	13580.6	11193.6	11714.9	12298.1	12051.4	12617.2	11140.7	11650.8	12171.2	12699.4	13236.8
Services	12369.9	12901.3	12280.0	12837.5	13459.4	13211.4	13822.5	14337.9	14979.6	15637.6	16310.4	16998.6
Consumption	4307.2	4660.0	4758.7	4948.7	5114.2	5303.2	5503.8	5715.9	5945.8	6197.7	6476.1	6785.0
Transfer Payments	5511.1	5456.0	5401.5	5347.4	5294.0	5241.0	5188.6	5136.7	5085.4	5034.5	4984.2	4934.3
(3) GOVERNMENT CONSUMPTION	43071.8	46600.1	47586.9	49486.9	51141.9	53032.2	55037.8	57158.8	59458.2	61977.2	64761.2	67850.4
(4) TRANSFER PAYMENTS	13777.8	13640.1	13503.7	13368.6	13234.9	13102.6	12971.6	12841.8	12713.4	12586.3	12460.4	12335.8
(5) PUBLIC SAVINGS	-10817.9	-12369.4	-11257.7	-11002.7	-10418.8	-10163.7	-9940.1	-9744.3	-9635.3	-9649.9	-9829.1	-10208.4

3.2.2 Scenario B: High Growth

Projections for real output through FY2000 under the High Growth Scenario are presented in Table 3.6. Average annual growth rates through the projection period range from 3.2 percent to 3.3 percent for Agriculture, 4.7 percent to 6.1 percent for Industry and 6 percent to 6.5 percent for Services. Growth rates for overall GDP are in the 4.8 percent-5.2 percent range under Scenario B.

Projections for current account variables are summarized in Table 3.7. Traditional merchandise exports show growth rates in the 0.4 percent- 0.6 percent range, while non-traditional exports grow at rates between 8.0 percent and 8.7 percent. Merchandise imports were assumed to increase at an average annual rate of 3.0 percent to 3.2 percent throughout the projection period, reflecting the increased demand for intermediate and capital goods under the High Growth assumptions. Foreign remittances were assumed to grow at an average rate of 2.6 percent, showing no change relative to Scenario A, since factor payments from abroad primarily depend on conditions in the labor markets in the Middle East and, as a first approximation, can be assumed to be exogenous to internal growth in Bangladesh. Deficits on current account are shown increase from 1109 million dollars in FY89 to 1759 million dollars in FY2000. Projections of public savings were first constructed, as shown in Table 3.7, with government revenues from tax and non-tax sources growing at between 5.2 and 5.6 percent, -1.0 percent growth in transfer payments and 10.5 percent annual growth rates in real government consumption.

Under the above set of assumptions, as is shown in Table 3.7, aggregate savings and aggregate investment are not in equilibrium: foreign savings requirements exceed the current account deficit and this discrepancy increases throughout the projection period. As shown in Table 3.8, savings-investment balance was achieved by lowering the projected growth rate of government consumption expenditures to 3.5 percent per annum. This reduced the absolute value of--negative--public savings and

TABLE 3.6

SCENARIO B: HIGH GROWTH -- PROJECTIONS OF REAL ACTUAL AND REAL POTENTIAL GDP BY SECTORS
(Million Taka of FY88 and Annual Percentages)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
Agriculture												
Actual GDP	287732.5	296917.1	307309.2	318317.5	330342.9	341244.2	352505.2	364137.9	376154.5	388567.6	401396.3	414636.2
Growth Rate		3.2	3.5	3.6	3.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Potential GDP	317936.5	325567.0	334031.7	343384.6	353686.2	365357.8	377414.6	389869.3	402735.0	416025.2	429754.1	443935.9
Growth Rate		2.4	2.6	2.8	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Industry												
Actual GDP	86223.7	90151.7	94749.5	99771.2	105258.6	111258.4	117822.6	125009.8	132635.4	140726.1	149310.4	158418.4
Growth Rate		4.6	5.1	5.3	5.5	5.7	5.9	6.1	6.1	6.1	6.1	6.1
Potential GDP	94336.6	98959.1	104006.0	109518.3	115541.9	122127.7	129333.3	137222.6	145593.2	154474.4	163897.3	173895.0
Growth Rate		4.9	5.1	5.3	5.5	5.7	5.9	6.1	6.1	6.1	6.1	6.1
Services												
Actual GDP	258571.3	274085.5	291078.8	309707.9	329838.9	351278.4	374111.5	398428.8	424326.6	451907.9	481281.9	512565.2
Growth Rate		6.0	6.2	6.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Potential GDP	317265.3	336301.3	357151.9	380009.7	404710.3	431016.5	459032.5	488869.7	520646.2	554488.2	590529.9	628914.4
Growth Rate		6.0	6.2	6.4	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Economy												
Actual GDP	632527.5	661154.4	693137.5	727796.6	765440.4	803781.0	844439.4	887576.5	933116.5	981201.6	1031982.6	1085619.8
Growth Rate		4.5	4.8	5.0	5.2	5.0	5.1	5.1	5.1	5.2	5.2	5.2
Potential GDP	729538.5	760827.4	795189.7	832912.6	873938.3	918502.0	965780.4	1015961.5	1068974.3	1124987.8	1184181.3	1246745.3
Growth Rate		4.1	4.3	4.5	4.7	4.9	4.9	4.9	5.0	5.0	5.0	5.0

TABLE 3.7

SCENARIO B: HIGH GROWTH -- EX-ANTE SAVINGS-INVESTMENT DISEQUILIBRIUM
(Million Taka and Million Dollars of FY88)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY97	FY98	FY99	FY00
(1) Real Gross Investment	75814.5	81716.1	88165.0	95224.7	102743.3	111235.8	118926.7	127296.4	134658.6	142485.4	150801.0	159637.5
(2) Gross National Savings	36795.8	36021.1	34930.7	33394.6	31421.7	28955.0	25931.2	22190.2	17713.7	11991.1	5266.9	-2584.1
Gross Private Savings	50543.2	51932.5	53360.0	54861.4	56405.3	57992.9	59625.5	61322.2	63067.5	64881.9	66749.1	68670.4
Domestic Savings	25047.7	25774.1	26521.5	27325.1	28151.1	29006.1	29885.0	30808.5	31760.4	32760.9	33792.9	34857.3
Remittances	25495.5	26158.4	26838.5	27536.3	28252.2	28986.8	29740.5	30513.7	31307.1	32121.1	32956.2	33813.1
Gross Public Savings	-13747.4	-15911.4	-18429.4	-21466.9	-24983.7	-29037.9	-33694.3	-39131.9	-45353.8	-52890.8	-61482.2	-71254.5
Govt. Revenue	46563.0	48975.0	51511.9	54293.5	57225.4	60315.5	63572.6	67075.4	70771.3	74451.4	78322.8	82395.6
Govt. Consumption	46532.6	51246.4	56437.6	62391.8	68974.1	76250.9	84295.3	93365.5	103411.7	114755.9	127344.6	141314.3
Transfer Payments	13777.8	13640.0	13503.6	13368.6	13234.9	13102.6	12971.5	12841.8	12713.4	12586.3	12460.4	12335.8
(3) Foreign Saving Requirement	39018.7	45695.1	53234.3	61830.1	71321.6	82280.8	92995.5	105100.2	116944.8	130494.2	145534.1	162221.6
(4) Real Exchange Rate	31.7	32.2	32.7	33.2	33.7	34.2	34.7	35.2	35.7	36.3	36.8	37.4
(5) Foreign Saving Requirement $	1230.1	1419.3	1629.1	1864.2	2118.6	2408.0	2681.3	2985.6	3272.9	3598.2	3953.6	4341.8
(6) Current Account Balance $	-1109.1	-1179.1	-1229.9	-1279.7	-1321.3	-1374.3	-1429.7	-1487.4	-1548.5	-1614.1	-1684.2	-1759.2
(7) S-I Balance	121.1	240.3	399.2	584.5	797.3	1033.7	1251.6	1498.1	1724.5	1984.1	2269.3	2582.5

Note: (3) = (1) - (2)
(5) = (3) ÷ (4)
(7) = (5) - (6)

TABLE 3.8

SCENARIO B: HIGH GROWTH -- SAVINGS-INVESTMENT BALANCE
(Million Taka and Million Dollars of FY88)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
(1) Real Gross Investment	75814.5	81716.1	88165.0	95224.7	102743.3	111235.8	118926.7	127290.6	134658.6	142485.4	150801.0	159637.5
(2) Gross National Savings	39585.2	41993.2	44509.4	47287.5	50199.4	53252.7	56454.9	59902.2	63523.9	67129.5	70907.4	74866.5
Gross Private Savings	50543.2	51932.5	53360.0	54861.4	56405.3	57992.9	59625.5	61322.2	63067.5	64881.9	66749.1	68670.4
Domestic Savings	25047.7	25774.1	26521.5	27325.1	28153.1	29006.1	29885.0	30808.5	31760.4	32760.9	33792.9	34857.3
Remittances	25495.5	26158.4	26838.5	27536.3	28252.2	28986.8	29740.5	30513.7	31307.1	32121.1	32956.2	33813.1
Gross Public Savings	-10958.0	-9939.3	-8850.6	-7574.0	-6205.9	-4740.2	-3170.5	-1420.0	456.4	2247.6	4158.3	6196.1
Govt. Revenue	46563.0	48975.0	51511.9	54293.5	57225.4	60315.5	63572.6	67075.4	70771.3	74451.4	78322.8	82395.6
Govt. Consumption	43743.2	45274.2	46858.8	48498.9	50196.4	51953.2	53771.6	55653.6	57601.5	59617.5	61704.1	63863.8
Transfer Payments	13777.8	13640.0	13503.6	13368.6	13234.9	13102.6	12971.5	12841.8	12713.4	12586.3	12460.4	12335.8
(3) Foreign Saving Requirement	36229.3	39723.0	43655.6	47937.2	52543.9	57923.1	62471.8	67388.2	71134.6	75355.8	79893.6	84771.0
(4) Real Exchange Rate	31.7	32.2	32.7	33.2	33.7	34.2	34.7	35.2	35.7	36.3	36.8	37.4
(5) Foreign Saving Requirement $	1142.2	1233.8	1336.0	1445.3	1560.8	1696.9	1801.2	1914.3	1990.8	2077.8	2170.4	2268.8
(6) Current Account Balance $	-1142.2	-1233.8	-1336.0	-1445.3	-1560.8	-1696.9	-1801.2	-1914.3	-1990.8	-2077.8	-2170.4	-2268.8
(7) S-I Balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: (3) = (1) - (2)
(5) = (3) x (4)
(7) = (5) - (6)

TABLE 3.9

SCENARIO B: HIGH GROWTH -- PROJECTIONS OF BALANCE OF PAYMENTS
(Million US Dollars of FY86)

	FY86	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
(1) CURRENT ACCOUNT												
Merchandise Exports	1297.6	1352.8	1412.9	1477.4	1546.8	1621.5	1702.0	1788.7	1882.1	1982.7	2091.2	2206.0
Traditional	641.8	645.0	646.1	651.5	654.8	656.2	661.6	665.1	668.6	672.1	675.8	679.4
Nontraditional	655.1	707.8	764.7	825.9	892.0	963.3	1040.4	1123.6	1213.5	1310.6	1415.4	1528.7
Merchandise Imports	-3077.6	-3200.1	-3326.1	-3461.3	-3599.7	-3742.7	-3893.4	-4049.2	-4211.2	-4379.6	-4554.8	-4737.0
Interest on Public Debt	-132.7	-145.9	-160.5	-176.6	-194.3	-213.6	-235.0	-258.5	-284.4	-312.8	-344.0	-378.5
Remittances	803.8	812.8	821.6	830.6	839.8	849.0	858.3	867.8	877.3	887.0	896.7	906.5
Others	-33.3	-53.2	-81.7	-115.5	-153.4	-210.1	-233.0	-263.1	-254.7	-255.1	-259.5	-268.0
Balance	-1142.2	-1233.8	-1336.0	-1445.3	-1560.8	-1696.9	-1801.2	-1914.3	-1990.8	-2077.8	-2170.4	-2268.8
(2) CAPITAL ACCOUNT												
Aid Disbursements	1656.4	1672.9	1690.0	1706.5	1723.6	1740.9	1758.3	1775.9	1793.6	1811.6	1829.7	1848.0
Project Aid	1225.7	1238.1	1250.6	1237.3	1249.0	1270.7	1248.5	1278.7	1264.5	1286.2	1271.7	1293.6
Commodity Aid	248.5	250.9	253.5	273.0	275.8	313.4	351.6	355.2	394.6	398.6	439.1	443.5
Food Aid	182.2	183.9	185.9	196.2	198.8	156.8	158.2	142.0	134.5	126.8	118.9	110.9
Amortization of Public Debt	-179.3	-193.6	-209.1	-225.8	-243.9	-263.4	-284.5	-307.3	-331.8	-358.4	-387.0	-418.0
Others	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0
Balance	1407.1	1409.3	1410.9	1410.7	1409.7	1407.5	1403.8	1398.6	1391.8	1383.2	1372.7	1360.0
(3) BALANCE OF PAYMENTS	264.9	175.5	74.9	-34.6	-151.1	-289.4	-397.4	-515.7	-599.0	-694.6	-797.7	-908.8
(4) GROSS RESERVES	1166.9	1334.4	1411.3	1376.7	1225.6	936.2	538.8	23.1	-575.9	-1270.5	-2066.2	-2977.1

Note: (3) = (1) + (2)

TABLE 3.10

SCENARIO B: HIGH GROWTH -- PROJECTIONS OF BALANCE OF PAYMENTS *
(Million US Dollars of FY88)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
(1) CURRENT ACCOUNT												
Merchandise Exports	1297.0	1352.8	1412.9	1477.4	1546.8	1621.5	1702.0	1786.7	1882.1	1982.7	2091.2	2208.0
Traditional	641.8	645.0	648.1	651.5	654.8	658.2	661.6	665.1	668.6	672.1	675.8	679.4
Nontraditional	655.1	707.8	764.7	825.9	892.0	963.3	1040.4	1123.6	1213.5	1310.6	1415.4	1528.7
Merchandise Imports	-3077.0	-3200.1	-3328.1	-3461.3	-3599.7	-3743.7	-3893.4	-4049.2	-4211.2	-4379.6	-4554.8	-4737.0
Interest on Public Debt	-132.7	-145.9	-160.5	-176.6	-194.3	-213.6	-235.0	-258.5	-284.4	-312.8	-344.0	-378.5
Remittances	803.8	812.6	821.6	830.6	839.8	849.0	858.3	867.8	877.3	887.0	896.7	906.6
Others	-33.3	-53.2	-81.7	-115.5	-153.4	-210.1	-233.1	-263.1	-254.7	-255.1	-259.5	-268.0
Balance	-1142.2	-1233.8	-1336.0	-1445.3	-1560.8	-1696.9	-1801.2	-1914.3	-1990.8	-2077.8	-2170.4	-2268.8
(2) CAPITAL ACCOUNT												
Aid Disbursements	1656.4	1672.9	1690.0	1741.1	1874.7	2030.3	2155.7	2291.6	2392.6	2506.2	2627.4	2756.8
Project Aid	1225.7	1238.1	1250.6	1262.4	1358.5	1481.9	1530.7	1650.0	1686.8	1779.4	1826.1	1929.8
Commodity Aid	248.5	250.9	253.5	278.5	300.0	365.5	431.1	458.3	526.4	551.4	630.5	661.6
Food Aid	182.2	183.9	185.9	200.2	216.2	182.9	194.0	183.2	179.4	175.4	170.7	165.4
Amortization of Public Debt	-179.3	-193.6	-209.1	-225.8	-243.9	-263.4	-284.5	-307.3	-331.8	-358.4	-387.0	-418.0
Others	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0	-70.0
Balance	1407.1	1409.3	1410.9	1445.3	1560.8	1696.9	1801.2	1914.3	1990.8	2077.8	2170.4	2268.8
(3) BALANCE OF PAYMENTS	264.9	175.5	74.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(4) GROSS RESERVES	1160.9	1336.4	1411.3	1411.3	1411.3	1411.3	1411.3	1411.3	1411.3	1411.3	1411.3	1411.3

Note: (3) = (1) + (2)

TABLE 3.11

SCENARIO B: HIGH GROWTH -- PROJECTIONS OF GOVERNMENT BUDGET AND PUBLIC SAVINGS
(Million Taka of FY88)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
(1) REVENUE BUDGET												
Income	46563.0	48975.0	51511.9	54293.5	57225.4	60315.5	63572.6	67075.4	70771.3	74451.4	78322.6	82395.6
Tax Income	38181.7	40159.5	42239.8	44520.7	46924.6	49458.7	52129.5	55001.8	58032.5	61056.1	64224.7	67564.4
Non-tax Income	8381.3	8815.5	9272.1	9772.8	10300.8	10856.8	11443.1	12073.6	12738.8	13401.3	14098.1	14831.2
Expenditure	47725.6	49027.8	50377.1	51775.2	53226.7	54730.4	56292.4	57913.3	59594.4	61338.5	63143.9	65016.9
Consumption	39368.9	40746.8	42172.9	43649.0	45176.8	46757.9	48394.4	50088.2	51841.4	53655.8	55533.7	57477.4
Transfer Payments	8266.7	8184.0	8102.2	8021.2	7941.0	7861.5	7782.9	7705.1	7628.1	7551.8	7476.3	7401.5
Others	90.0	97.0	102.0	105.0	109.0	111.0	115.0	120.0	125.0	131.0	134.0	138.0
(2) DEVELOPMENT BUDGET												
Expenditure	42433.8	43934.5	43558.2	45178.6	46980.9	46440.5	48230.8	48431.9	50264.5	52148.3	54078.1	56055.7
Expenditure Net of Consumption & Transfer	32548.3	33951.1	33470.9	34981.3	36667.3	36004.1	37665.0	37729.8	39419.0	41152.0	42923.5	44735.0
Agriculture	7159.9	7469.1	9997.4	10428.9	10909.8	10741.2	11225.4	12251.2	12788.5	13343.2	13913.7	14499.6
Industry	13018.5	13580.6	11193.6	11714.9	12298.1	12051.4	12617.2	11140.7	11650.8	12171.2	12699.4	13236.8
Services	12369.9	12901.3	12280.0	12837.5	13459.4	13211.4	13822.5	14337.9	14979.6	15637.6	16310.4	16998.6
Consumption	4374.3	4527.4	4685.9	4849.9	5019.6	5195.3	5377.2	5565.4	5760.2	5961.8	6170.4	6386.4
Transfer Payments	5511.1	5456.0	5401.5	5347.4	5294.0	5241.0	5188.6	5136.7	5085.4	5034.5	4984.2	4934.3
(3) GOVERNMENT CONSUMPTION	43743.2	45274.2	46858.8	48498.9	50196.4	51953.2	53771.6	55653.6	57601.5	59617.5	61704.1	63863.8
(4) TRANSFER PAYMENTS	13777.8	13640.1	13503.7	13368.6	13234.9	13102.6	12971.6	12841.8	12713.4	12586.3	12460.4	12335.8
(5) PUBLIC SAVINGS	-10956.0	-9939.3	-8859.6	-7574.0	-6205.9	-4740.3	-3170.6	-1420.0	456.4	2247.6	4158.3	6196.0

thus the requirements foreign savings. The adjusted figures, showing overall saving-investment balance, are displayed in Table 3.8.

Implications of the projected trajectories from the standpoint of the evolution of international reserves are displayed in Table 3.9. It can be seen that, with foreign disbursements growing at 0.43 percent per year in real terms, there is a surplus in the balance of payments through FY91, after which there are sustained and growing deficits in the balance of payments, causing international reserves to reach a value of -2977 million dollars by FY2000, a clearly unfeasible outcome. The adjustments made by increasing foreign aid disbursements in order to reduce the balance of payments deficit and stabilize the level of foreign exchange reserves are shown in Table 3.10. Table 3.11 shows the projected evolution of key components of the government budget corresponding to Scenario B.

3.3 Analysis of Scenarios

The main conclusions that emerge from the scenario projections are that, if present trends in investment financing and foreign trade continue, a GDP target growth rate of 3.8 percent would lead to increasing deficits in the balance of payments as of FY96, while a target growth rate of 5.2 percent for GDP would lead to deficits in the balance of payments as of FY92. Furthermore, in the case of 5.2 percent growth, the level of gross international reserves would reach negative levels by FY97 and would attain clearly unfeasible negative values before FY2000. For this last set of projections, involving 5.2 percent GDP growth, a modified scenario, denoted Scenario B* in Table 3.17, has been constructed assuming that from FY92 onwards, levels of foreign aid would increase sufficiently so as to stabilize the level of international reserves by eliminating the balance of payments deficits. The evolution of the levels of gross international reserves for Scenario A, Scenario B and Scenario B* are depicted in Fig. 3.10.

Departures from the postulated scenarios can be readily hypothesized. If both the deficit on current account and the savings-investment gap were narrowed, then the postulated growth rates might be achieved without increases in the postulated levels of foreign aid. Another favorable departure might arise through reversal of past trends in the deterioration of capital productivity. It should be noted that, given the assumed rates of GDP growth for Scenarios A and B, the corresponding requirements for investment have been estimated assuming that capital productivity would evolve according to historical trends. Whether the marginal productivity of capital will increase in the future --or, equivalently, whether the Incremental Capital-Output Ratio (ICOR) will decrease--cannot be ascertained with exactitude **ex ante**. The future evolution of the marginal productivity of capital is the result of two opposing sets of forces: on the one hand, increased efficiency due to learning effects, improved managerial skills and higher quality of capital and, on the other hand, diminishing returns due to increasing long-run marginal cost curves for most economic activities, primarily agriculture. The net effect of these two opposing sets of forces cannot be predicted with precision, which motivates our assumption of modeling future behavior on the basis of realized performance. However, the possibility that the net effects on marginal capital productivity will lead it to increase over the next decade cannot be dismissed. If this were to occur, levels of total investment required to achieve the postulated growth rates in GDP would diminish and the difficulties with the behavior of international reserves identified above would be alleviated.

Table 3.12 presents the key assumptions on savings behavior, fiscal and foreign sectors, underlying the postulated scenarios. The growth rates for these variables were computed on the basis of income elasticities derived from the historical record. Table 3.13 shows the impact of Scenarios A and B on sectoral and global levels of employment. The consequences of the hypothesized scenarios on future food production and food import requirements are summarized in Table 3.14 and depicted in Fig. 3.5 and Fig. 3.6. Table 3.15 shows the alternative levels of per capita income and per capita consumption achievable under Scenarios A and B throughout the

planning horizon. Tables 3.16 and 3.17 show the behavior of the current account balance and the balance of payments under the postulated scenarios.

Table 3.12
ASSUMPTIONS FOR PROJECTED SCENARIOS

	Scenario A Low Growth		Scenario B High Growth
ANNUAL GROWTH RATES			
Agriculture GDP	2.2%		3.2%-3.3%
Industry GDP	4.7%		4.7%-6.1%
Services GDP	5.0%		6.0%-6.5%
Economy GDP	3.8%		4.8%-5.2%
Private Domestic Savings	2.5%		2.9%-3.1%
Remittances	1.1%		1.1%
Govt. Revenues	3.8%		5.2%-5.6%
Govt. Consumption[1]	8.0%	(6.0%)	10.5% (3.5%)
Govt. Transfer Payments	-1.0%		-1.0%
Traditional Exports	0.4%		0.4%-0.6%
Non-Trad. Exports	6.4%		8.0%-8.7%
Imports	2.4%		3.0%-3.3%

Figures in parentheses refer to growth rates after adjustment to ensure savings -- investment balance.

Figure 3.1

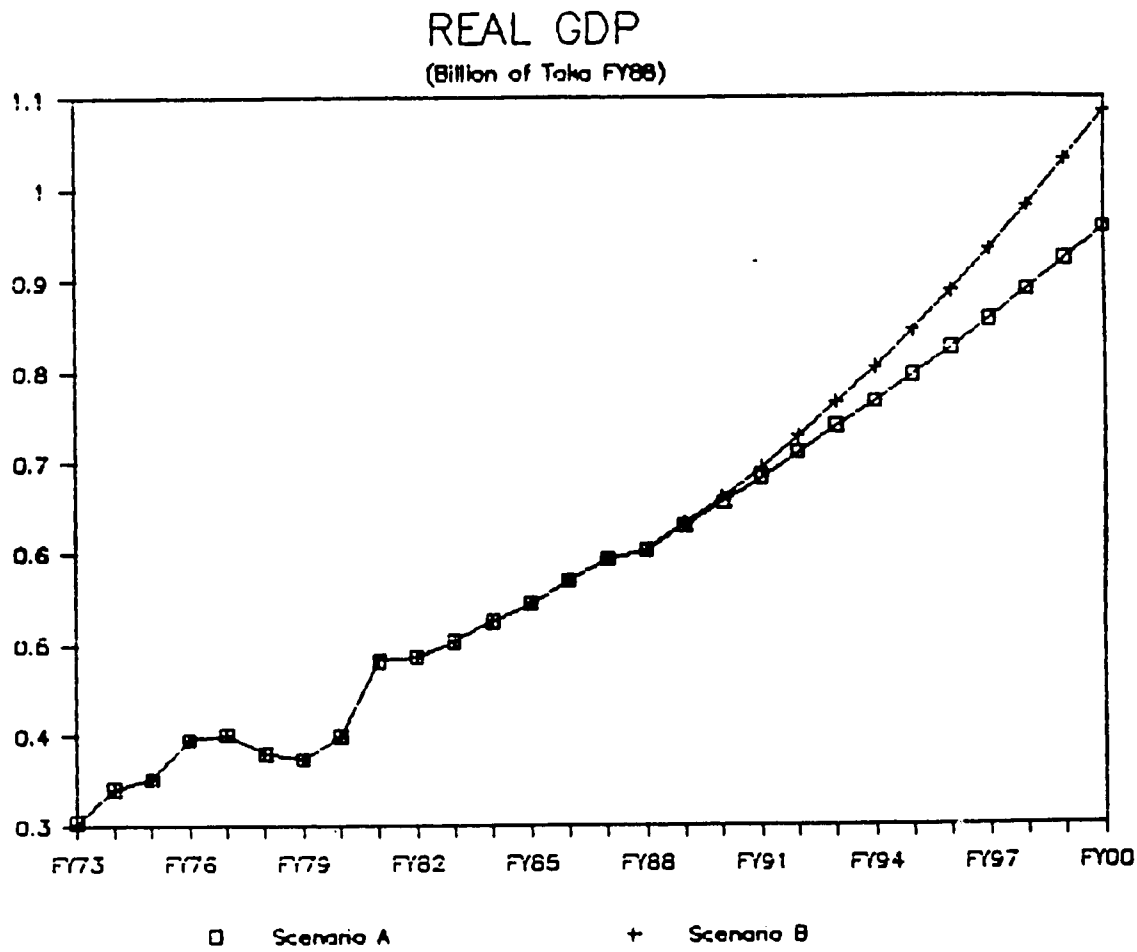

REAL GDP
(Billion of Taka FY88)
1.1
1
0.9
0.8
0.7
0.6
0.6
0.4
0.3
FY73
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
FY00
Scenario A
Scenario B

Table 3.13

EMPLOYMENT IMPACTS OF PROJECTED SCENARIOS

Employment Impact	Scenario A Low Growth	Scenario B High Growth
AGRICULTURE		
Mill. Emp. 2000	18.21	18.71
Mill. Emp. 1988	16.84	16.84
Gain	2.37	2.87
%Gain	14.11	15.34
%Annual Growth	0.56	0.85
INDUSTRY		
Mill. Emp. 2000	7.19	7.91
Mill. Emp. 1988	4.00	4.00
Gain	3.19	3.91
%Gain	79.75	97.75
%Annual Growth	5.04	6.83
SERVICES		
Mill. Emp. 2000	21.99	26.34
Mill. Emp. 1988	11.10	11.10
Gain	10.89	15.24
%Gain	98.11	137.29
%Annual Growth	5.85	7.60
ECONOMY		
Mill. Emp. 2000	47.41	52.96
Mill. Emp. 1988	31.93	31.93
Gain	15.48	21.03
%Gain	48.48	65.86
%Annual Growth	3.23	4.78
New Entrants 1989/2000	13.12	13.12
Net Reduction in Unemployment (Millions)	2.36	7.91

Figure 3.2

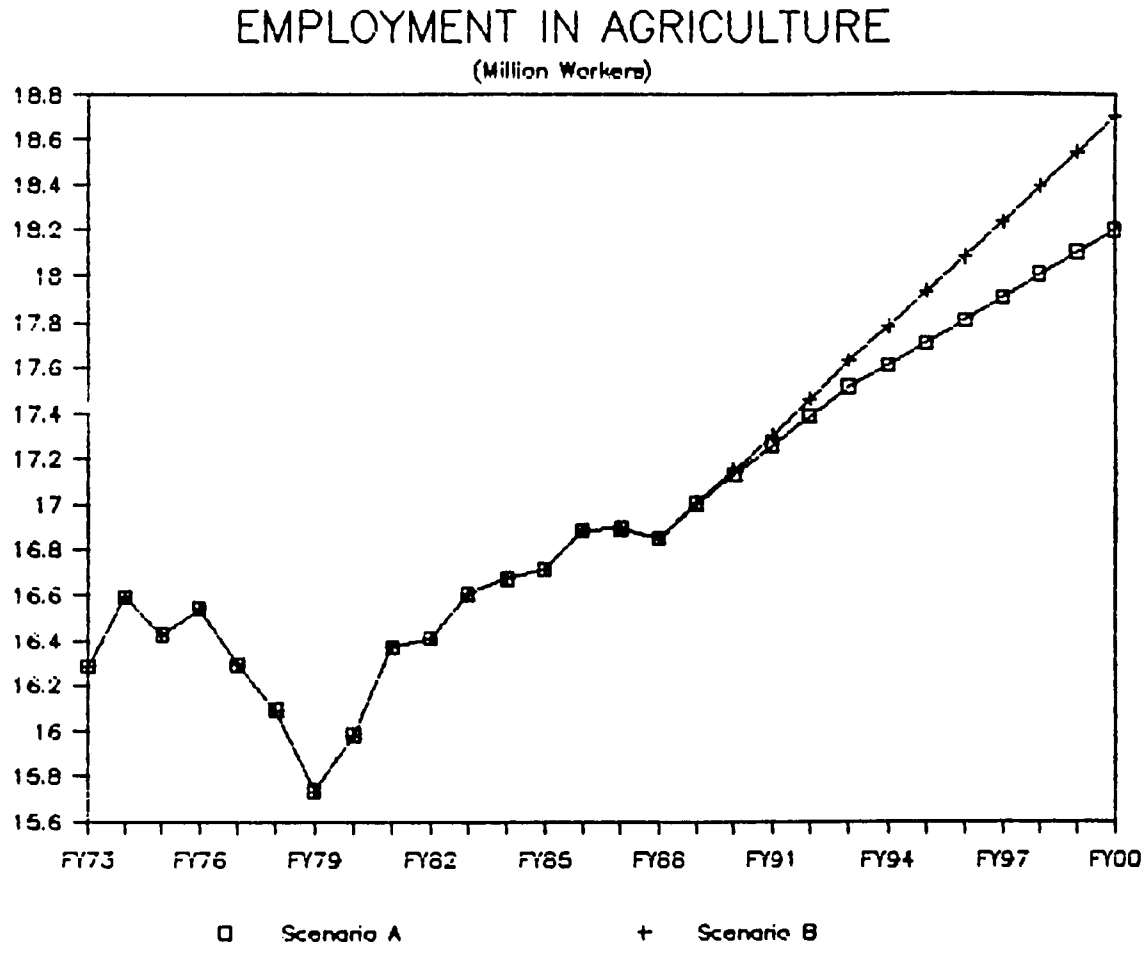

EMPLOYMENT IN AGRICULTURE
(Million Workers)
18.8
18.6
18.4
18.2
18
17.8
17.6
17.4
17.2
17
16.8
16.6
16.4
16.2
16
15.8
15.6
FY73
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
FY00
Scenario A
Scenario B

Figure 3.3

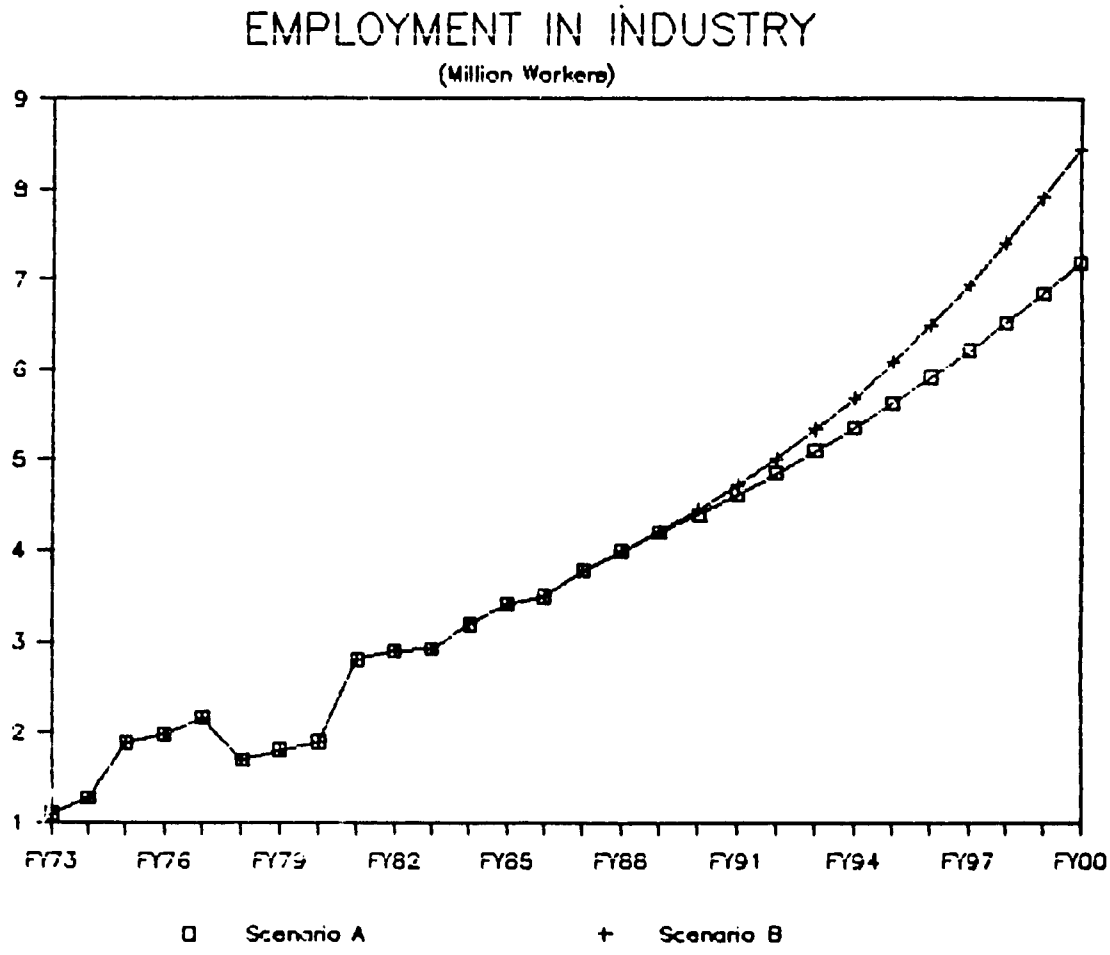

EMPLOYMENT IN INDUSTRY
(Million Workers)
9
8
7
6
5
4
3
2
1
FY73
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
FY00
Scenario A
Scenario B

Figure 3.4


EMPLOYMENT IN SERVICES
(Million Workers)
28
26
24
22
20
18
16
14
12
10
8
6
4
2
FY73
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
FY00
Scenario A
Scenario B

Table 3.14

FOOD PRODUCTION AND IMPORT REQUIREMENTS

Population: FY89 111.1 million
FY95 128.5
FY00 144.2
Growth Rate: 85-90 2.51%
90-95 2.45%
95-00 2.33%

Nutritional Target Requirements
15.5 ounces of foodgrain per day per capita

FY89 17.82 MMT
FY00 23.13 MMT

		Scenario A Low Growth	Scenario B High Growth
FOODGRAIN PRODUCTION			
(MMT)	FY1989	15.83	15.83
	FY1995	18.61	19.39
	FY2000	20.75	22.81
IMPORT REQUIREMENTS			
(MMT)	FY1989	1.99	1.99
	FY1995	2.00	1.22
	FY2000	2.38	0.3

Figure 3.5

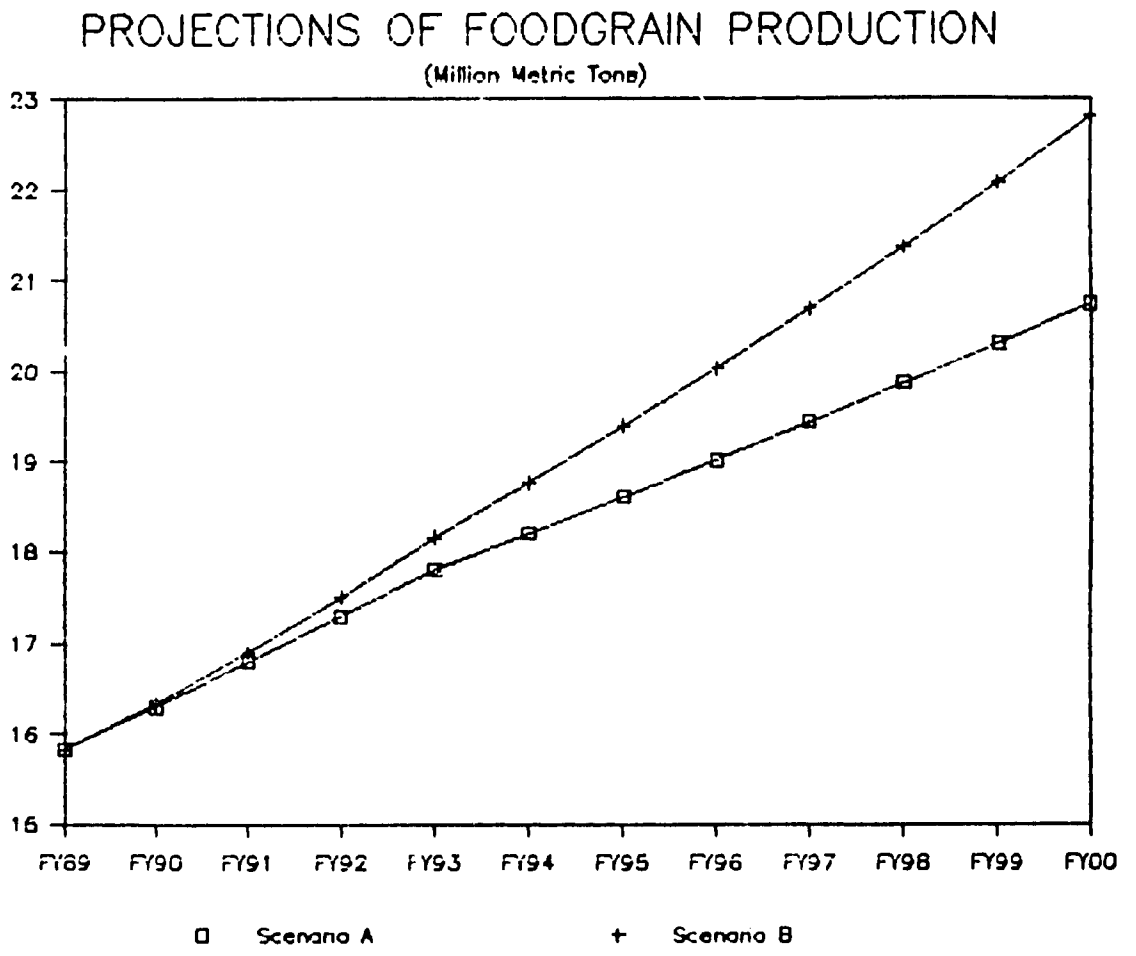

PROJECTIONS OF FOODGRAIN PRODUCTION
(Million Metric Tons)
23
22
21
20
19
18
17
16
15
FY89
FY90
FY91
FY92
FY93
FY94
FY95
FY96
FY97
FY98
FY99
FY00
Scenario A
Scenario B

Figure 3.6

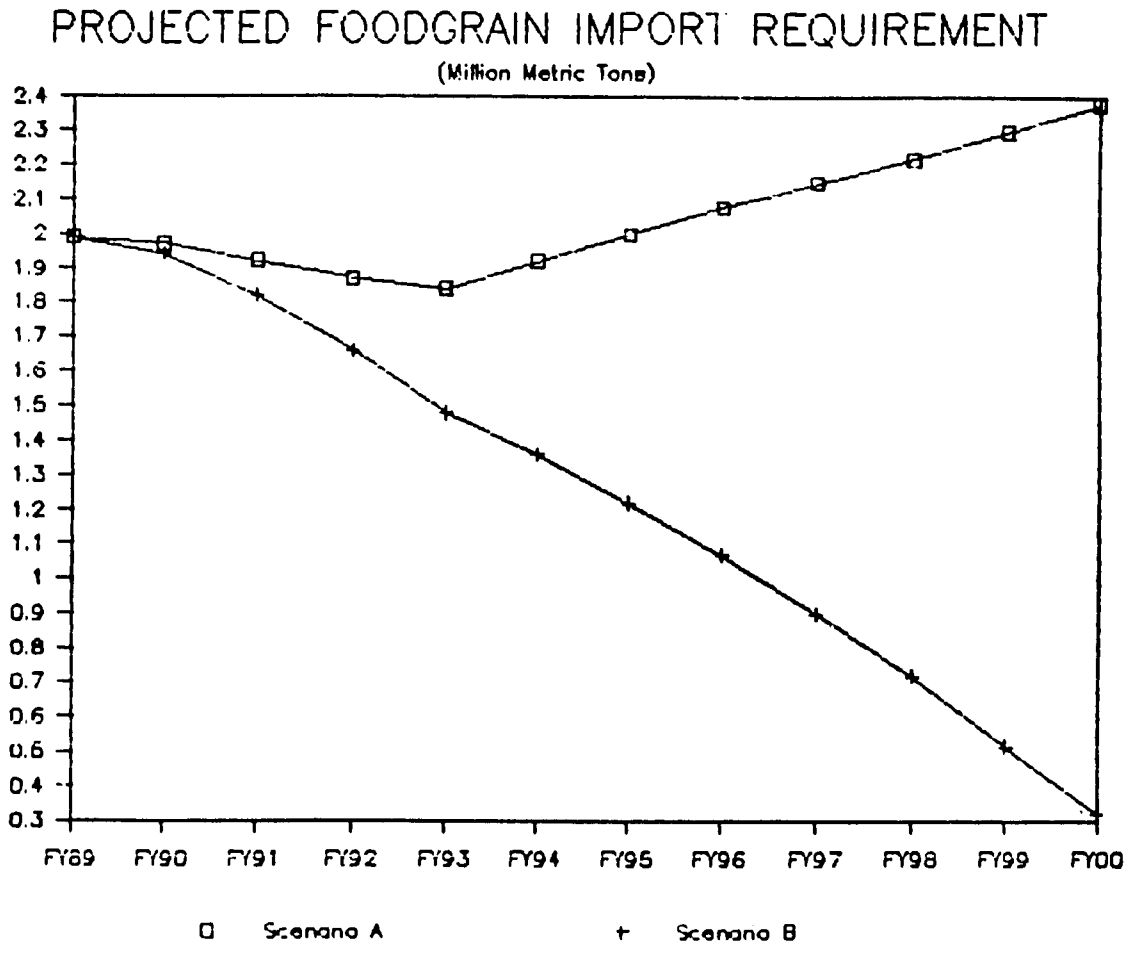

PROJECTED FOODGRAIN IMPORT REQUIREMENT
(Million Metric Tons)
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
FY89
FY90
FY91
FY92
FY93
FY94
FY95
FY96
FY97
FY98
FY99
FY00
Scenario A
Scenario B

Table 3.15

PER CAPITA INCOME AND CONSUMPTION

	Scenario A Low Growth	Scenario B High Growth
GDP PER CAPITA		
Real Taka of FY88		
FY1989	5620	5620
FY1995	6190	6585
FY2000	6605	7497
Real US$ of FY88		
FY1989	151	151
FY1995	179	184
FY2000	178	191
CONSUMPTION PER CAPITA		
Real Taka of FY88		
FY1989	5102	5102
FY1995	5504	5807
FY2000	5811	6613

Figure 3.7

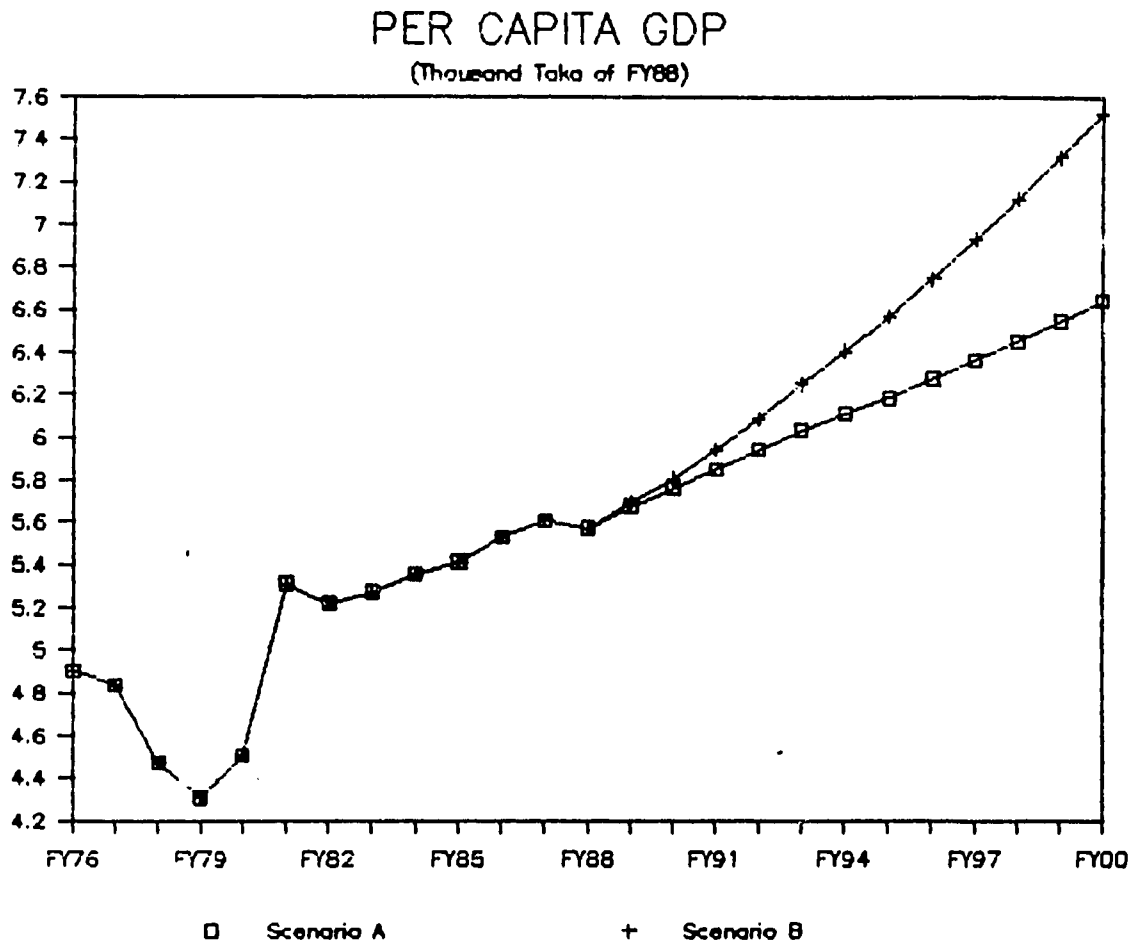

PER CAPITA GDP
(Thousand Taka of FY88)
7.6
7.4
7.2
7
6.8
6.6
6.4
6.2
6
5.8
5.6
5.4
5.2
5
4.8
4.6
4.4
4.2
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
FY00
Scenario A
Scenario B

Figure 3.8

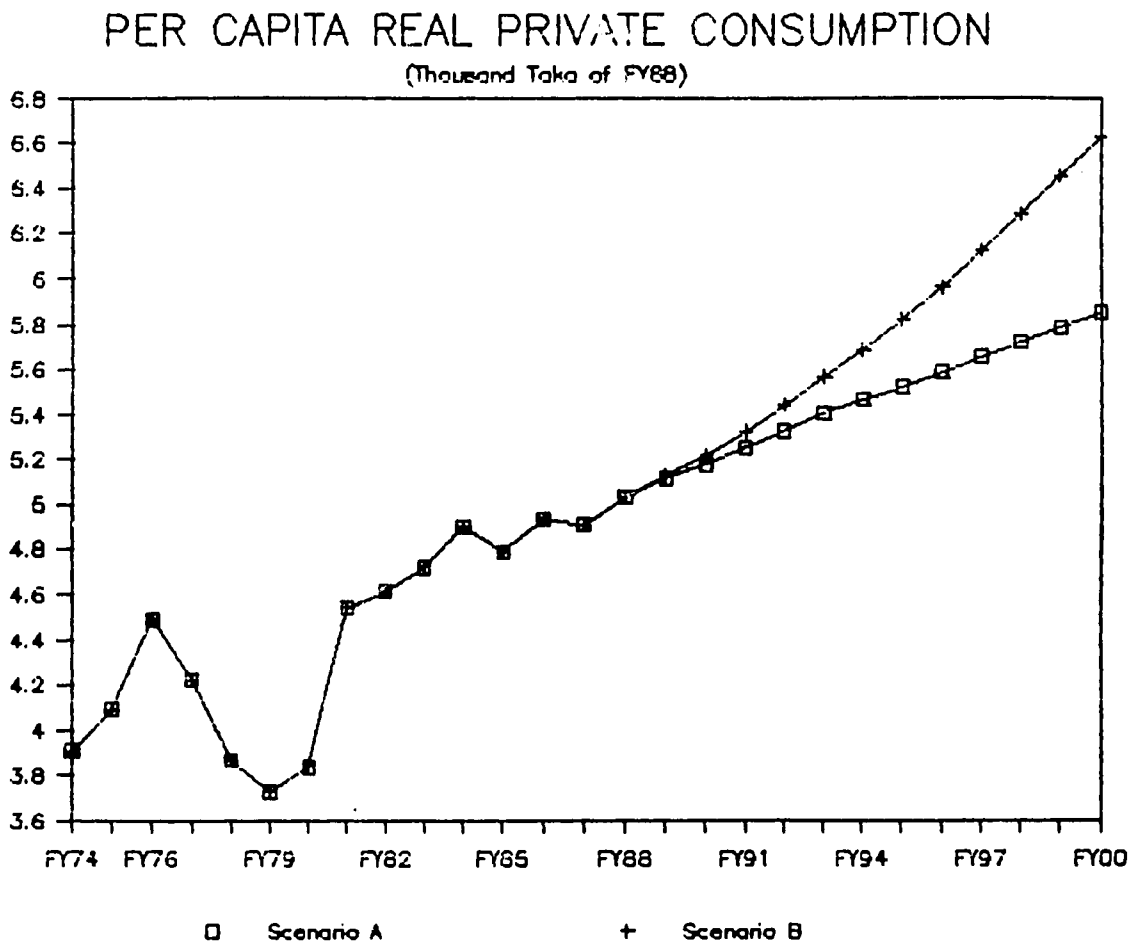

PER CAPITA REAL PRIVATE CONSUMPTION
(Thousand Taka of FY88)
6.8
6.6
6.4
6.2
6
5.8
5.6
5.4
5.2
5
4.8
4.6
4.4
4.2
4
3.8
3.6
FY74
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
FY00
Scenario A
Scenario B

Table 3.16

PROJECTIONS OF CURRENT ACCOUNT BALANCE

	Scenario A Low Growth	Scenario B High Growth
Merchandise Exports		
FY1989	1286.6	1297.0
FY1995	1591.2	1702.0
FY2000	1942.2	2208.0
Merchandise Imports		
FY1989	3026.7	3077.0
FY1995	3469.2	3893.4
FY2000	3886.9	4737.0
Remittances		
FY1989	803.8	803.8
FY1995	858.3	858.3
FY2000	906.6	906.6
Current Account Balance		
FY1989	-1098.7	-1142.2
FY1995	-1367.1	-1801.2
FY2000	-1692.7	-

Figure 3.9

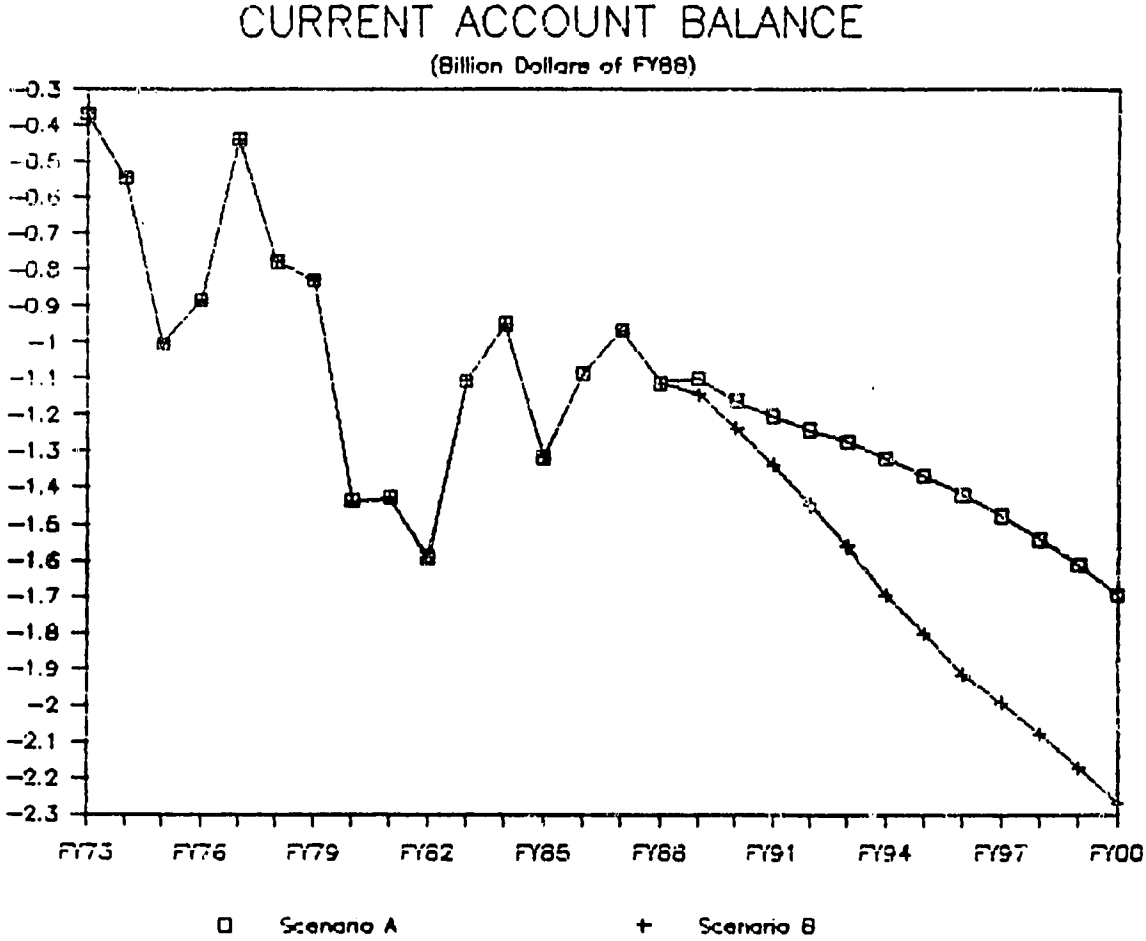

CURRENT ACCOUNT BALANCE
(Billion Dollars of FY88)
-0.3
-0.4
-0.5
-0.6
-0.7
-0.8
-0.9
-1
-1.1
-1.2
-1.3
-1.4
-1.5
-1.6
-1.7
-1.8
-1.9
-2
-2.1
-2.2
-2.3
FY73
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
FY00
Scenario A
Scenario B

Table 3.17

PROJECTIONS OF BALANCE OF PAYMENTS AND AID REQUIREMENTS

	Scenario A Low Growth	Scenario B High Growth	B*
BALANCE OF PAYMENTS			
FY1989	308.4	264.9	
FY1995	36.7	-397.4	(0.00)
FY2000	-332.7	-908.8	(0.00)
DEVELOPMENT AID			
FY1989	1656.4	1656.4	(1656.4)
FY1995	1758.3	1758.3	(2155.7)
FY2000	1848.0	1848.0	(2756.8)
INTERNATIONAL RESERVES			
FY1989	1204.4	1160.9	(1160.9)
FY1995	2097.3	538.8	(1411.3)
FY2000	1259.5	-2977.1	(1411.3)

Scenario B*--High Growth with Adjustments in Capital Account

Figure 3.10

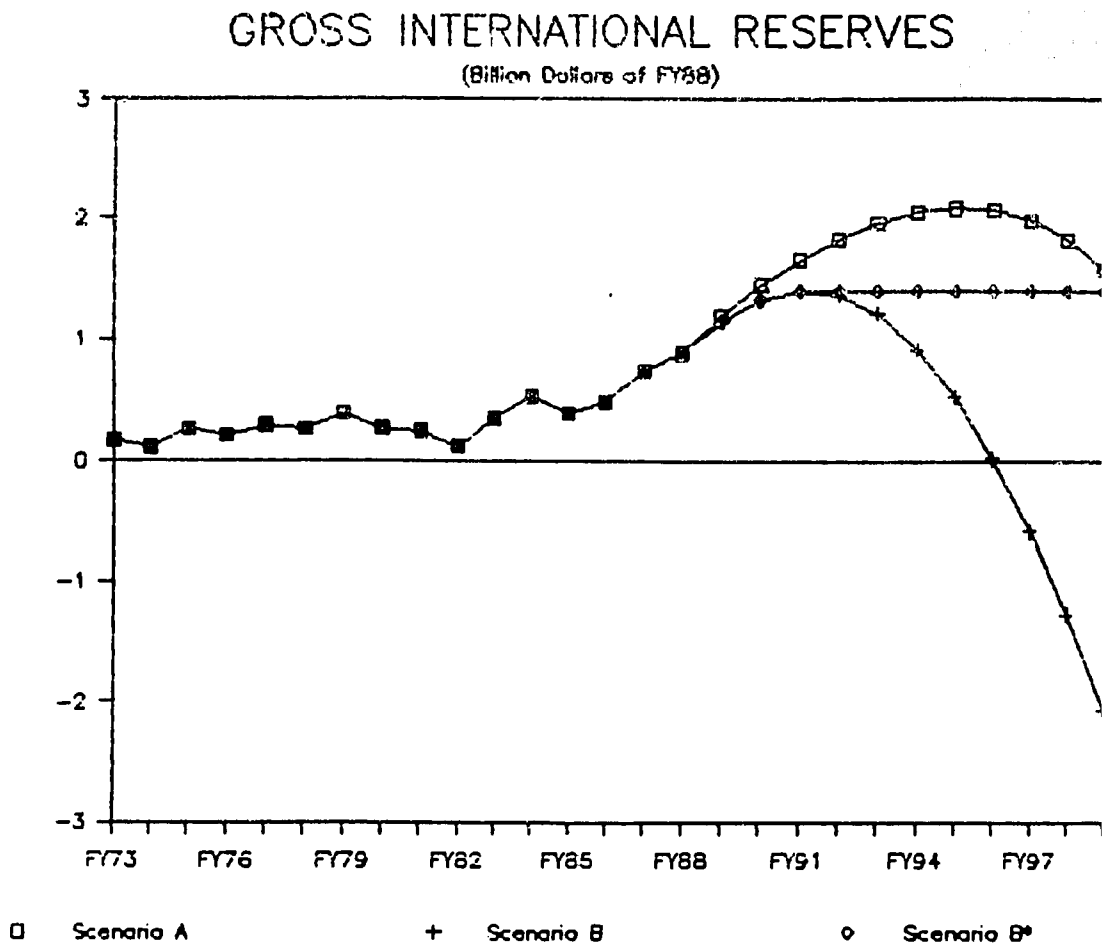

GROSS INTERNATIONAL RESERVES
(Billion Dollars of FY88)
3
2
1
0
-1
-2
-3
FY73
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
Scenario A
Scenario B
Scenario B*

Figure 3.11

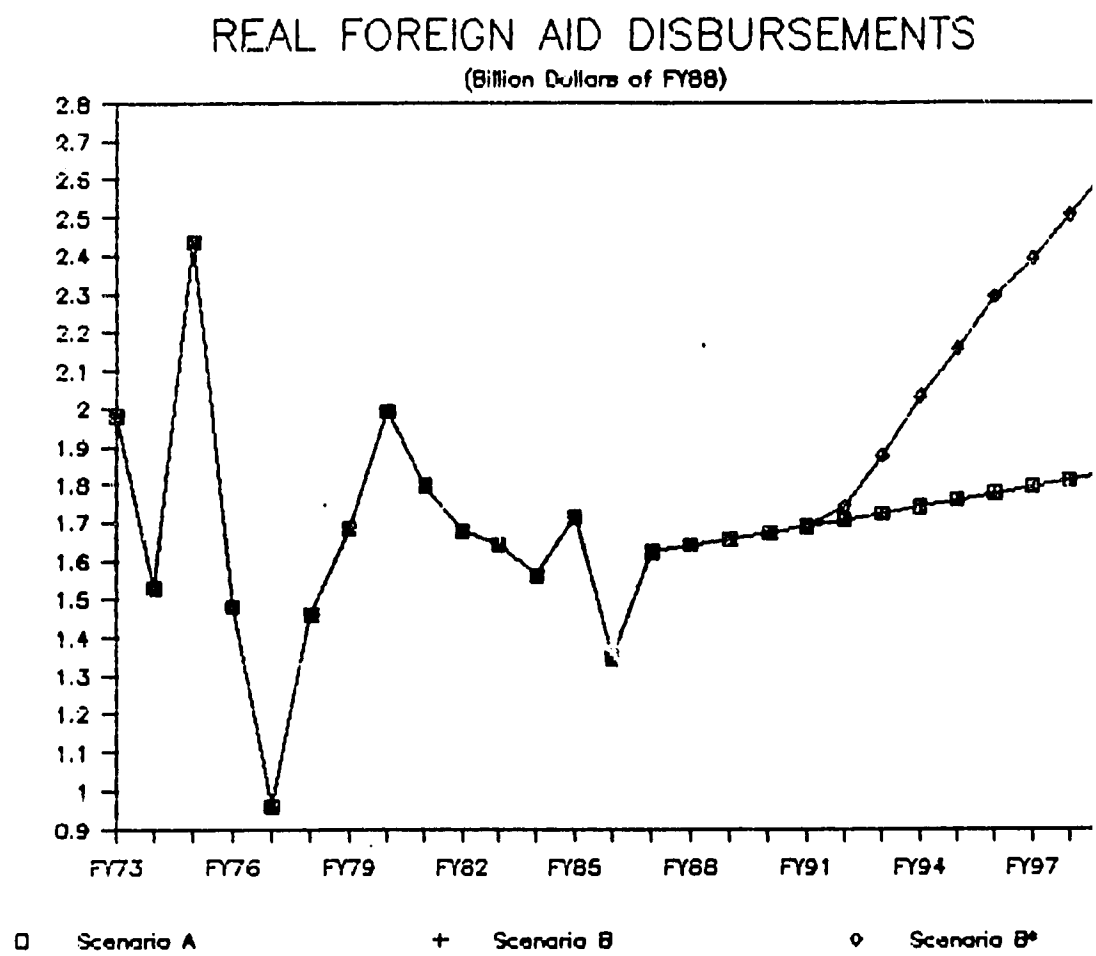
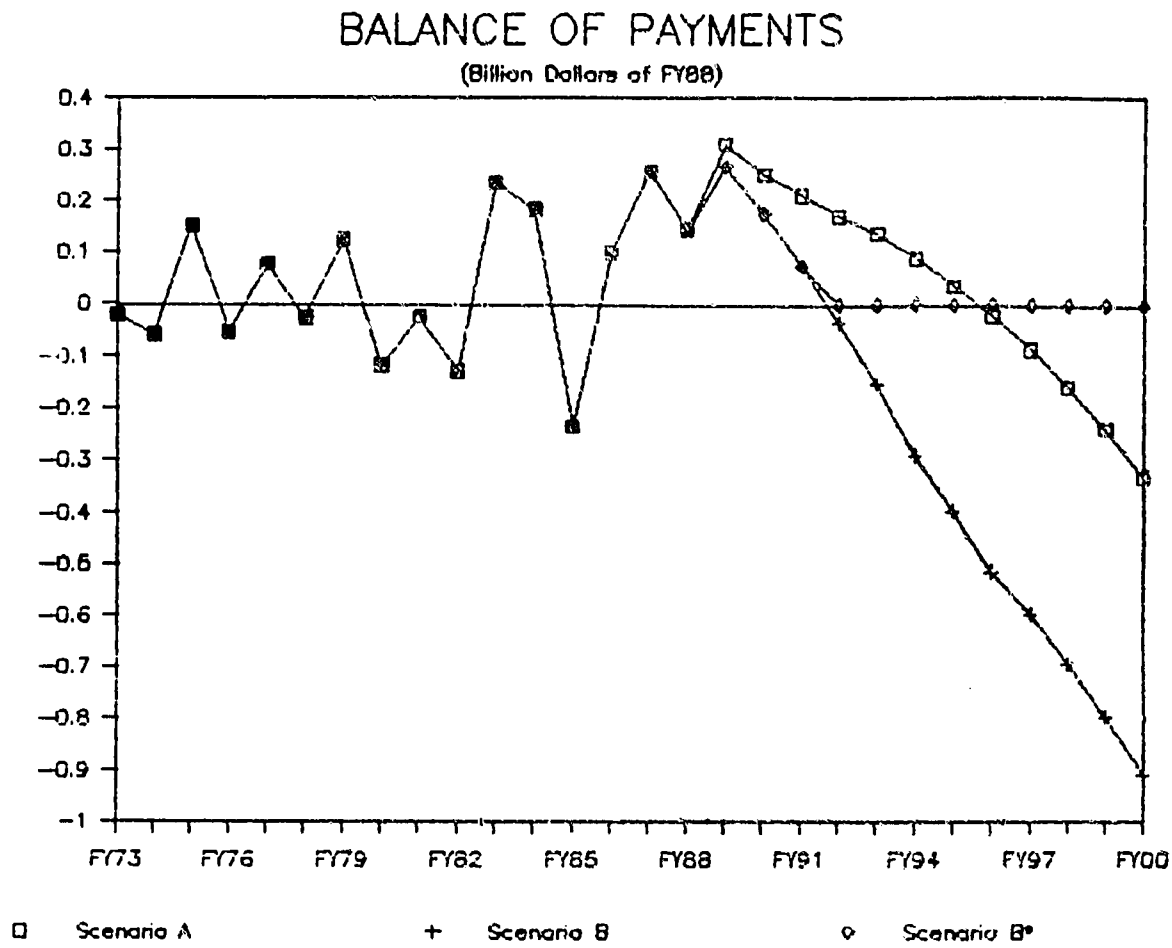

REAL FOREIGN AID DISBURSEMENTS
(Billion Dollars of FY88)
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1
0.9
FY73
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
Scenario A
Scenario B
Scenario B*

Figure 3.12


BALANCE OF PAYMENTS
(Billion Dollars of FY88)
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4
-0.5
-0.6
-0.7
-0.8
-0.9
-1
FY73
FY76
FY79
FY82
FY85
FY88
FY91
FY94
FY97
FY00
Scenario A
Scenario B
Scenario B*

4. RECOMMENDATIONS

A new strategic theme underlies programs and interventions recommended for implementation by USAID/Bangladesh: investment in human resources. It is recommended that by the end of the forthcoming CDSS period, at least 50 percent of project aid be devoted to programs related to education, training and skills development, including the new initiatives described below:

- Food for Education Program;
- National Center for Trade and Investment; and
- National Center for Employment and Productivity.

The proposed new emphasis on human capital development integrates the following features:

- Exploitation of comparative advantage of USAID in gaining access to technical specialists and training resources;
- Elimination of existing sociopolitical barriers is not a strict prerequisite for success;
- Potential payoffs are very great given the low levels of human capital serving as a point of departure;
- Direct benefits include enhanced export potential, increased employment and productivity; and
- Indirect benefits include enhanced absorptive capacity of development aid and greater efficiency of investment generally.

4.1 Development and Aid Delivery

4.1.1 NGO Network

The network of over 500 volunteer organizations -- nongovernmental organizations or NGOs -- that exists within Bangladesh is one of the largest in the world. This network constitutes an underutilized resource since its members operate in a disaggregated,

disconnected fashion. By establishing an integrative framework, USAID/Bangladesh should attempt to employ this network for the purposes of increasing efficiency in development aid delivery, taking advantage of the network's presence at the community level and affording the possibility of bypassing governmental institutions.

4.2 Food and Agriculture

4.2.1 Technology Diffusion

Diffusion of modern technologies should be continued and intensified, through improved and extended financing modalities for the procurement of shallow tube-wells (STWs), high-yielding variety seeds (HYVs) and fertilizer inputs.

4.2.2 Agricultural Research

Support should be strengthened for research activities aimed at developing indigenous, location-specific, high-yielding varieties of foodgrains and other crops. Employment intensity and efficiency of crop production and crop processing should be enhanced by promoting research for appropriate technologies which are capital-saving, land-saving and labor-using.

4.2.3 Food for Education

Feasibility studies should be conducted for programs aimed at distribution of PL-480 food aid by means of lunches for schoolchildren. This would provide greater strength in negotiating government support for education and would lessen difficulties stemming from the system of indirect subsidies for food.

4.2.4 Efficiency of Rural Markets

With a view towards the long-term, studies should be undertaken to quantify the economic and financial costs and benefits of restructuring rural markets and the system of land ownership. Carefully conceived changes in the system of land tenure may drastically alleviate the chief impediments that now exist for the achievement of increased efficiency through greater competition in the markets for land, labor, credit, crop production, processing, and distribution. These are options that Bangladesh cannot afford not to consider.

4.3 Private Sector and Employment

4.3.1 Export Growth

A sustainable growth path which does not demand ever-increasing levels of foreign assistance requires continued improvement in export performance. To achieve this goal, the following initiatives are recommended.

- **Promotional Policies.** Export promotion should be pursued by means of:
  - Increased access to imported inputs for exporters;
  - Tariff reductions to reduce anti-export biases;
  - Duty drawback arrangements;
  - Back-to-back letter of credit facilities;
  - Income tax rebates;
  - Preferential interest rates and financing provisions; and
  - Bonded warehouse facilities.
- **Training.** A National Center for Trade and Investment should be sponsored by USAID/Bangladesh and possibly other donors with the

objective of providing training in international marketing, technology transfer and export financing to Bangladeshi nationals from private enterprises, financial institutions and universities. The Center would also promote information dissemination in comparative cost structures, transportation networks and foreign trading companies and advise the government in the formulation and implementation of export promotion policies. The Export Promotion Project of USAID/Bangladesh should be used as a point of departure for this initiative.

- **Export Substitution.** Spectacularly impressive growth in exports of ready-made garments warrants special attention be devoted to this market segment. Informal employment in the garments industry equals the sum total of employment in all industries composing the entire formal manufacturing sector. Specific studies should be commissioned to:

  -- Identify the sources of past growth for this segment;

  -- Identify possible interventions to maximize future growth paths;

  -- Identify ways and means to replicate realized growth processes for other nontraditional export segments; and

  -- Establish backward linkages with other native manufacturing sectors, e.g., cloths and fabrics --so as to reduce the import content of garment manufactures.

4.3 Employment and Productivity

Employment generates income and productivity growth generates income increases from a given resource base. The following initiatives are recommended to promote these objectives.

- **Microenterprise Development.** Efforts to promote the growth of small-scale and medium-scale industries, microenterprises and informal/cottage industries should be vigorously pursued through expansion of the Enterprise Development Project, the Private Rural Initiatives Project, the Women's Entrepreneurship Development Project and the creation of new projects. A network of **Microindustry Development Poles** should be created in ten key locations throughout the country. The objectives of this network will be:

- To provide access to credit for informal industries;

- To establish backward linkages with agricultural producers and forward linkages with commercial and distribution networks; and

- To serve as focal points for the delivery of training, support and extension services.

The Development Poles should actively engage the participation of rural communities in the formulation of product and marketing strategies, buttressed by the contribution of NGOs. The network of **Microindustry Development Poles** will encourage a reversal of trends in migration from rural to urban areas, while strengthening linkages between the crop, noncrop and service sectors in employment generation and between the formal and informal sectors in the supply of financial services. Complementary to the high labor-intensity of microindustries is the lower import content of their intermediate input structure, thus contributing to the overall policy objectives of structural adjustment programs.

- **Training.** A National Center for Employment and Productivity should be created aimed at promoting the training of top executives, middle-managers, engineers, technicians, foremen and production-line workers in private and public enterprises. Training should be imparted in all aspects of productivity enhancement: strategic productivity planning and the design of systems for incentives and rewards, control of direct and indirect costs for increased competitiveness, shop-floor industrial engineering and time-and-motion studies, and the design and implementation of quality circles. The Center will also conduct studies and advise the government on the identification, generation and transfer of appropriate technologies for productivity enhancement through the implementation and use of capital-saving, labor-using techniques. In addition, the Center will seek to identify modalities for increased integration between the formal and informal sectors.

4.4 Population and Family Planning

4.4.1 Demand Segmentation

In order to quantitatively evaluate the potential returns of alternative strategies for fertility reduction, it is essential to estimate, by means of suitably designed survey studies, the composition of the target population in terms of segments exhibiting

differential susceptibility of their fertility behavior to alternative fertility reduction initiatives. Such key segments would include:

- Segment susceptible to supply expansion--excess demand or "unmet needs" segment;
- Segment susceptible to information dissemination and promotional marketing campaign;
- Segment susceptible to increased literacy rates;
- Segment susceptible to increases in income and physical quality of life indices; and
- Segment essentially unreachable -- religious beliefs, sociocultural bias.

4,4.2 Cost Internalization

Mechanisms should be investigated that might provide suitable incentive and disincentive signals to alternative modes of fertility behavior, thus generating, in effect, a structure for the internalization of overpopulation costs to individual economic agents.

APPENDIX A

Agriculture: Performance and Outlook

APPENDIX A
Agriculture: Performance and Outlook

The Sector

Agriculture is the dominant sector of the Bangladesh economy. Agricultural income for 1987-88 is estimated at US $8.8 billion, about 48 percent of the gross national product of the country (US $18.3 billion). In 1985, the sector employed 16.7 million workers, 58 percent of the total civilian labor force. The country earned in 1986-87 US $0.4 billion from exports of raw jute, tea, leather and fish, which accounted for about 38 percent of the total export earnings of the country; if exports of jute manufactures were included, the share would rise to about 67 percent. The dominant industry, jute manufacturing, is dependent on agriculture for its raw materials, and the major fast growing industry, fertilizer, sells most of its output to the domestic agricultural sector. Agriculture is the main source of income of the estimated 80 percent of the households who live in rural areas, and hence it is an important determinant of the market for non-farm goods and services. The trends and fluctuations of the major macro variables of the economy therefore largely depend on the performance of agriculture.

The agricultural sector is dominated by the crop production activity. In 1987-88 crop production accounted for 70 percent of the agricultural income. The share of livestock, fisheries and forestry was 13.1, 8.1 and 8.9 percent respectively. There are few commercial livestock farms. Animal husbandry is practiced as a subsistence activity, to supply energy for crop farming and to meet household requirements for animal products. According to the 1983-84 agricultural census, crop farmers operating more than 0.5 acres accounted for 89 percent of the cattle population and 72 percent of the poultry birds in the country. The 1984-85 labor force survey estimated 507,000 full-time fishermen and 124,000 livestock workers, about 3.0 and 0.7 percent of the total agricultural labor force.

The climate and soil in Bangladesh are suitable for growing a wide variety of crops throughout the year. But Bangladesh is basically a rice economy. About four-fifths of the sown area (about 33 million acres) are allocated to this crop, which is harvested three times during the year -- not necessarily on the same land -- during November to January (aman) April to June (boro) and August to September (aus). Other crops of some importance are jute, wheat, sugarcane, potato, tobacco, tea and different varieties of pulses, oilseeds and spices.

Some structural changes have taken place in land allocation over the last two decades. Wheat was an unimportant crop until the mid-70s, but a rapid increase in area during the late 1970s, at the expense of pulses and oilseeds, has made it the third major crop after rice and jute. The expansion of wheat area has however decelerated since the early 1980s. Rice area has continued to grow both absolutely and relatively, mainly as a result of double cropping with pre-monsoon varieties (aus) on medium-high land during the 1960s, and with dry season boro rice on the low- and medium-low land (facilitated by the expansion of irrigation facilities) since the mid-70s. The area under the main rice crop, aman, has remained stagnant at around 14 millions acres over the last three decades.

Recent trends in production growth

After a few years of stagnation in the early 1970s, when the economy struggled to recover from the destructions of production capacity caused by the war of independence, Bangladesh agriculture achieved moderate progress. The growth trend for the last decade for various subsectors as estimated from value added data reported in national accounts are as follows:

Table 1: Recent trends in growth of agricultural production, 1978-88

Sub-sectors	1978-86	1978-88
	Average Annual growth rate	
Crop	2.3	1.9
Livestock	2.9	2.6
Fisheries	2.8	2.4
Forestry	4.6	3.4
Agriculture	2.6	2.1

During 1987 and 1988 the economy was ravaged by abnormally severe floods. The loss of production particularly in the crop sector led to deceleration in agricultural growth. These abnormal years may not be repeated. Hence the performance of the sector in recent years may be judged by rates of growth for the 1978-86 period. During this period the crop sector grew at a rate of 2.3 percent per year, but due to relatively higher rates of growth in forestry, livestock and fisheries, overall agricultural income grew at 2.6 percent.

The growth in the crop sector originated from a narrow base. Cereal production grew at a rate of 2.8 percent per year, compared to 1.0 percent for cash crops and 0.3 percent for noncereal food crops. About four-fifths of the growth of cereals production has been on account of the winter season crops of boro rice and wheat, supported by a relatively rapid expansion of irrigation facilities in the early 1980s. The production of wheat tended to stagnate. Over the last few years boro rice remained the only source of growth. While grain production remained stagnant at about 16.5 million tons over the 1986-89 period, the production of boro rice increased from 3.7 million tons in 1985-86 to about 5.7 million tons in 1988-89 which compensated the severe loss to aman production caused by the recent floods.

The growth in grain production during the dry season was achieved partly at the expense of the noncereal food crops. The area sown under pulses, oilseeds and spices has declined mainly due to reallocation of land to wheat and boro rice, as expansion of irrigation facilities enabled farmers to exploit the relatively more profitable modern varieties available for rice and wheat. The decline in production has been severe for pulses, the major source of protein intake for the poor.

The production performance of the major cash crop, jute, has been erratic and has responded to the highly fluctuating jute-rice price ratio. The production of jute fell from level of 1.3 million tons in 1969-70 to 0.7 million tons by 1974-75, and did not recover the pre-independence level till 1984-85. An exceptionally high level of prices prevailing in 1984-85 however induced farmers to grow a record crop of 1.6 million tons in 1985, which followed a drastic drop in prices during 1985-87. During 1987-88 the size of the harvest was again down to 0.86 million tons.

The unbalanced nature of growth among various sub-sectors within agriculture is indicated by changes in relative price for their products which reflect trends in supply in relation to demand. The following estimates of the value added deflators are obtained from the data on sectoral income at current and constant (1972-73) prices published in national accounts:

Table 2: Changes in relative agricultural prices, 1972-88

Sectors	Income deflator (1972-73=100)		Increase per year year (percent)	
	1982-83	1987-88	1972-82	1982-88
Agriculture	369	723	13.9	14.4
Crop	363	654	13.8	12.5
Livestock	392	883	14.6	17.6
Fisheries	343	887	13.1	20.9
Forestry	443	1220	16.0	22.5
Non-agriculture	402	608	14.9	8.6
Gross domestic product	385	657	14.4	11.3

Source: Computed from estimates of national income at current and constant prices, published by the Bangladesh Bureau of Statistics.

The above information suggests that up to 1982-83 the internal terms of trade was against agriculture; the income deflator for non-agriculture increased at a rate of 14.9 percent per year during the 1972-82 period, compared to 13.9 percent for the agricultural sector. Within agriculture the prices of livestock and forestry products increased at a faster rate than those for crop and fisheries sector. During the 1982-88 period however the terms of trade moved in favor of agriculture, with agricultural prices increasing at 14 percent compared to about nine percent increase in non-agricultural prices. But this was mainly due to relatively rapid increase in prices for the non-crop agricultural products. The annual rate of increase in prices was about 18 percent for livestock, 21 percent for fisheries and 23 percent for forestry products, compared to 12.5 percent for crops. Within the crop subsector, the price or rice, wheat and potato increased at a slower rate than that of pulses and oilseeds.

The analysis of trends price suggests that the supply of most agricultural products could not keep pace with demand. If the government had not augmented the domestic supply of grains through commercial imports and food aid, the relative prices of cereals could also have had an upward trend. The livestock, fishery and forestry sector products have strong markets, since consumers spend relatively larger proportion of their incremental income on these goods, as income increases. For Bangladesh the income elasticity of demand is estimated at 1.35 for meat, 1.23 for milk, 0.96 for fish, compared to 0.47 for rice and only 0.04 for wheat. The per capita income has increased at 1.8 percent and population at 2.3 percent per year over the last decade, indicating that the demand for the products of the non-crop agricultural sectors possibly increases at a rate varying from 4 to 5 percent, while their supply increases at less than three percent per year. Since many of these products are non-tradables, the excess demand could not be met through imports. So their relative prices had to increase substantially in order to clear the market.

By increasing profitability, the price trends should have induced producers to increase supply which in turn would have lowered prices within a few years. Apparently this has not happened,

particularly in non-crop agriculture sectors. It suggests existence of serious supply side constraints to growth of production for these sectors, which cannot be overcome merely by providing price incentives.

Impact on productivity and employment

A positive aspect of recent agricultural growth is that crop production has increased on a base of a relatively fixed amount of land and workers. This means that there has been a respectable increase in both land and labor productivity. The cultivated land increased marginally from 20.4 million acres in 1976-77 to 21.7 million acres in 1986-87, a rate of increase of only 0.6 percent per year. The latest labor force survey gives the following picture about changes in the composition of the employed labor force:

Table 3: Changes in agricultural labor force, 1974-85

	1974	1984-85	Annual rate of growth (percent)
Agriculture (million persons)	16.8	16.7	nil
Non-agriculture (million persons)	4.6	12.3	9.8
Total	21.4	29.0	2.9

While the labor force has increased at a rate of about 2.9 percent per year, they were absorbed mostly in the non- agricultural sector (both in rural and urban areas) and the size of the agricultural labor force remained constant. Thus income per agricultural worker has increased at the same rate as the growth in agricultural value added.

Although the number of agricultural workers remained constant, the volume of employment in crop production had an upward movement due to an increase in the intensity of cropping and gradual reallocation of land from traditional to modern varieties of foodgrains, which are relatively more labor-intensive. On the assumption of a constant labor coefficient in individual crop varieties, it is estimated that these factors may have increased agricultural employment from 1.83 billion person days in 1976-77 to 2.10 billion days in 1986-87, an increase of about 1.4 percent per year. This means that employment per agricultural worker in crop production increased from 109 days to 126 days per year, and labor productivity from TK. 88 to TK. 96 (at constant 1988 prices) per day during the 1976-86 period.

The above estimates also suggest limited potential of employment generation through the crop-sector. The rate of growth of production and employment during 1976-86 period indicate that 1 percent increase in crop production increases employment by only 0.6 percent. If the growth in crop production could be accelerated to a maximum of about 3.5 percent, it would generate employment to the extent of about 43 million person days a year, equivalent to 154 thousand new jobs for 280 days a year. On the assumption that 80 percent of the workers live in rural areas and the labor force grows at a rate of 2.9 percent, about 673,000 workers enter the labor market in

rural Bangladesh every year. Thus, under the most optimistic scenario, crop sector may absorb only 23 percent of the new entrants to the labor force. Therefore, attention must be given to non-crop agriculture and non-agricultural activities for generating employment for the growing labor force.

National level information on employment generating potential of the non-crop agricultural activities is lacking. A recent study based on a survey of 16 villages found that an average rural household supplied about 70 hours of labor per week of which only 53 percent was allocated to crop cultivation. The share of other activities was 7.4 percent for livestock, 7.0 percent for fishing, 7.9 percent for trade, 11.3 percent for construction and transport and the remainder 13.7 in services, industry and various other activities. The study has also noted that an increase in agricultural income stimulates the demand for rural-based non-agricultural products and services relatively more than crops. The landless and near landless low-income households are employed more in the former activities than in the latter. Thus, a vibrant crop sector can lead employment generation and income growth in non-farm rural activities through private initiatives.

Strategy and Policies

Up to the end of the 1950s the government made very little intervention in the market for promoting agricultural growth. But a relative stagnation of crop production coupled with an acceleration of population growth set a rapidly declining trend in the per capita availability of food. It became apparent that a respectable growth of production could no longer be achieved through expansion of cultivated land. The use of modern agricultural inputs such as chemical fertilizers and mechanical irrigation was almost nonexistent at that time. The main obstacles to the expansion of irrigation and the use of fertilizers through the private sector was the small average size of farm, fragmented and scattered holdings and the initial thin market for the relatively unknown modern inputs. Government intervention was thus necessary at this stage to expand irrigation facilities and to introduce and popularize modern agricultural inputs among farmers.

In the early 1960s, the government launched a "grow more food" campaign with a package of policies, which included, among others, establishment of public control in the procurement and distribution of modern agricultural inputs, direct government involvement in development of flood control, drainage and irrigation facilities without any tax burden imposed on the beneficiaries, strengthening of the research and extension system for developing high yielding crop varieties, suitable for local environments and for extending them to farmers. The Bangladesh Agricultural Development Corporation (BADC) was established in 1961 and was entrusted with the monopoly of procurement and distribution of seeds, fertilizers and small scale irrigation equipment. A master plan was prepared for the water resource development and the Water Development Board (BWDB) was established for implementing it.

With the monopoly in business, the BADC started establishing fertilizer stores in upazila centers, selling fertilizers to farmers at highly subsidized prices through appointed fertilizer dealers, and began to rent out low lift power pumps and deep tubewells to farmers' cooperatives at a nominal charge. The BWDB took up a few large scale multipurpose water resource development projects (such as Ganges-Kobtak Project and Chandpur irrigation project) and began construction of embankments along the major rivers and in coastal areas for protection of land from floods and intrusion of saline water. The capital and operation and maintenance costs of the BWDB activities were borne entirely by the government.

By the mid-70s the policies regarding fertilizer and irrigation came under serious review. As a result of the government interventions, the sale of chemical fertilizers increased rapidly and the

operations began to put a heavy burden on the government budget. In 1975-76, the expenditure for agricultural development activities accounted for nearly 23 percent of the total public expenditure, and about 44 percent of the development resources for agriculture was spent for water resource development, and 28 percent, for subsidies on fertilizer. The choice of the technology in water resource development became a major issue. The small scale irrigation equipment was thought to be more appropriate which could mobilize investment from the private sector and save on substantial amount of subsidy given for water resource development. Also, questions were raised about the income distribution effects of the agricultural subsidies. The irrigation cooperatives were found to be controlled by large and medium farmers, who tended to use the cooperatives for their own benefit.

As a result, several policy changes were introduced. Beginning from the mid-70s, the government paid more attention to the development of ground water resources through deep tubewells (mostly of two cusec capacity) and shallow tubewells (less than 0.5 cusec capacity). The government also decided to introduce a sales program for the small irrigation equipments to individuals and cooperatives, and to gradually phase out the previous program of renting them to cooperatives. The subsidy on irrigation on deep tubewells and large scale projects implemented by the BWDB were however retained.

A new marketing system (NMS) was introduced for fertilizer distribution beginning from 1978. The new system allows any person, group or organization to register as a fertilizer dealer who can trade in fertilizer anywhere in the country. The BADC closed its upazila sale centers and consolidated its sale points at major commercial centers, known as the primary distribution points (PDP). In order to promote wholesalers, the government introduced a minimum quantity restriction on fertilizer lifting and provided higher rates of discounts to traders for lifting in larger amounts. Initially, the fertilizer traders were to sell fertilizer to farmers at the government determined prices. This however hampered movement of fertilizers to remote areas, because transport costs were to be absorbed by traders. Recognizing this problem the government introduced the policy of fertilizer price deregulation beginning from April 1983.

The government also adopted a policy of gradual elimination of subsidies from fertilizer beginning from the mid-seventies. As a result of this policy, the subsidy on fertilizer was reduced from about 28 percent of the agricultural development budget to about 10 percent in the early 1980s and was almost completely eliminated by 1985-86.

In recognition of the problem that the policy changes would increase the cash costs of cultivation, the government also introduced a policy of price support for rice and wheat, and rapid expansion in the supply of agricultural credit through financial institutions. The impact of these changes in policy on agricultural development remains controversial.

Recent evaluations of the policy changes indicate that the privatization in the distribution of agricultural inputs has been welcomed by farmers. It increased competition among fertilizer traders. In areas well connected by paved roads fertilizer was sometimes sold at a price lower than the government determined price, which indicates that competitive pressures compel traders to share the discounts with farmers. But the traders keep very little stock and are less interested in moving fertilizer to interior areas, or to areas where the market is thin due to unfavorable production environments (such as the coastal area and the highly flooded areas in the east and the south). Also at times of scarcity, they raise prices at abnormally high levels which was demonstrated during the fertilizer crisis in September-December 1984. The success of the new system in maintaining easy availability of fertilizer is dependent on careful demand projections and on maintaining adequate stocks by the BADC.

The area under irrigation has expanded very fast after the emphasis given on extraction of ground water, and the introduction of the sales programme for minor irrigation equipment. But in the absence of proper zoning of areas suitable for different types of equipment, the privatization programme has led to improper siting of equipment leading to low capacity utilization. The sales programme had a limited impact on mobilization of private resources, since about three-fourths of investment was financed with credit from financial institutions, and a large proportion of the loans could not be recovered. When the government became strict in maintaining financial disciplines in the credit programme beginning in 1986, the sales of irrigation equipment dropped drastically. The policy may also have had an adverse effect on equity, since the equipments were purchased mostly by the medium and large farmers who sold water to owners of adjoining plots at charges much higher than the cost on account of investment and operation and maintenance.

The agricultural credit program was characterized by concentration of loans in the hands of a few medium and large farmers and a very poor rate of recovery of loans. It is estimated that only 15 to 20 percent of the farm households receive agricultural loans, and at most a third of the loans is recovered in due time. The poor recovery of loans reduced the availability of loanable funds for expansion of credit and led to the practice of loan rescheduling by the bank to show better recovery performance in paper. Since a part of the loan disbursed every year is in fact used for showing recovery of old loans, the impact of the largely expanded supply of credit on financing the fixed and working capital needs of the farmers is not clear.

The price support program also has not been particularly successful. The amount of rice procured remained a small proportion of the total harvest. In most of the good harvest years (e.g., 1975-76, 1980-81, 1985-86), growers' price in the market remained substantially below the procurement price particularly after the boro harvest.

It is apparent from the above review that the focus of the government's agricultural policy has so far been on foodgrain production. The achievement of a relatively respectable growth in foodgrain production under the severe land constraint is a positive outcome of this policy. The non-foodgrain sectors have however been relatively neglected. During 1975-84 nearly 25 percent of the public sector investment was allocated to agriculture, nearly half of that was for water resource development which benefitted mostly foodgrain production activity. A third of the allocation was for input distribution, extension and research which also benefitted largely the foodgrain sector. The fisheries, livestock and forestry subsectors received less than 10 percent of the public resources for agricultural development.

The policy of reduction of subsidies on agricultural inputs has led to a drastic fall in the agriculture's share of the development budget. During 1985-88 agriculture's share of the annual development budget was 18.4 percent, about one-third down from the level of 1979-84 period. It appears that the savings from the withdrawal of subsidy has been diverted to non-agricultural sectors of the economy, which may have had some adverse effect on the recent performance of the sector.

Potential and Constraints

In Bangladesh the growth of production is seriously constrained by the scarcity of land. The potential for expansion of land frontier has long been exhausted. Cultivated land increased marginally from 20.5 to 21.6 million acres during the 1950-70 period, and has remained stagnant at

that level since then. The culturable waste land is only 0.7 million acres, only about 3 percent of the land already brought under cultivation. In fact, the cultivated land may shrink in future in order to meet the claim for housing for the growing population and factories for industries.

Production may be increased through more intensive utilization of the land during the year, i.e., from raising more than one crop. This was indeed an important source of growth of production in the 1960s, when farmers went for double-cropping with pre-monsoon rice (aus) on the suitable medium high land, and pulses and oilseeds on medium-low land, both of which were previously single cropped with aman (monsoon-season) rice. The cropping intensity increased from 131 to 151 percent during the sixties, but since then a substantial deceleration in the growth of cropping intensity is recorded. Total cropped area increased by only 9 percent during the 1975-87 period compared to a growth of 21 percent during the 1960s. This has happened in spite of rapid expansion of irrigation facilities in the later period, which provides scope for raising an additional foodgrain crop during the dry winter season. It appears then that cropping intensity as a source of increasing production has almost dried up.

Another source of increasing production is a gradual increase in crop yield through more intensive application of inputs such as labor and fertilizer. Bangladesh has been densely settled for a long time, and most of the labor force remained employed in crop production. So it is difficult to argue that labor use remains at sub-optimal level and that yield could be increased through more intensive use of labor on the same crop variety. It is hardly expected that there is an unmet demand for labor. In fact agricultural labor remains surplus for most of the time during the year, and until very recently there was a downward trend in the real agricultural wage rate. Labor shortage is sometimes reported at the harvesting time, but harvesting labor does not contribute to an increase in yield.

Some scope for increasing yields through more efficient and intensive use of chemical fertilizer may still remain. Recently micro-level studies have found that for many local varieties less than a half of the land is treated with chemical fertilizers, indicating potential for further diffusion of fertilizer use in these crops. Also, farmers use fertilizer in doses much below the amount recommended by extension agents and the application is highly unbalanced. Risks of cultivation due to natural hazards, and fluctuations in output prices may be partly responsible for the relatively sub-optimal level of application of fertilizers. Stabilization of yields and prices would be necessary to induce farmers to expand fertilizer use on previously untreated land and to increase the application rates to optimum levels.

Yields could also be raised to some extent by supply of good quality seeds, as most of the farmers use self-preserved seeds which have low germination rates and a high proportion of admixtures with other seeds and inert matters.

Intensive use of inputs is not expected to have more than a marginal impact on increasing crop production. Over the last decade yields of individual crop varieties have hardly increased. For local varieties of rice and for non-rice crop the yield increase has been limited to about 0.5 percent per year, while for modern varieties the yields have tended to decline with their adoption by marginal farmers on marginal land. The major source of growth of crop production, as mentioned earlier, has been the diffusion of the modern high-yielding varieties of foodgrains. The future growth of production will depend on the unutilized potential of this new technology, and the extent to which farmers could be induced to tap this potential.

Technological Development

Since 1970 the Bangladesh Rice Research Institute (BRRI) and the Bangladesh Agricultural Research Institute (BARI) have released a large number of modern rice and wheat varieties, and their seeds have been multiplied by the BADC for distribution among farmers. The modern varieties of rice are suitable for growing throughout the year. The yield of modern varieties is about 1.8 to 2.1 times higher than the substitute local varieties for the dry season and about 60 percent higher for the monsoon season. A reallocation of land from local to modern varieties, even if total cropped area remains unchanged, would substantially increase rice production. The area that has been covered by modern varieties up to 1987-88 is as follows:

Table 4: Area covered by modern varieties of foodgrains, 1987-88

Season	Total cropped area (000 acres)	Area under modern varieties (000 acres)	Percent of area covered
Wet season (aman rice)	13,816	2,958	21.4
Dry Season (wheat and boro and aus rice)	13,167	6,757	51.3
Total	**26,983**	**9,715**	**36.0**

Thus, the diffusion of modern varieties still remains low, at about 36 percent of the total foodgrain area -- 21 percent for the wet season and 51 percent for the dry season. Obviousiy, the potential of expansion is still vast.

The 1972 Land and Water Resource Sector Study notes that most of the land in Bangladesh are suitable for growing modern rice varieties. The realization of the potential however depends on the development of flood control drainage and irrigation facilities.

The Master Plan Organization (MPO), which recently prepared a National Water Plan, has classified the land resources of Bangladesh into five types according to flood depth. About 36 percent of the area is classified as high land, which is flooded at a depth of less than 30 cm. This type of land is most suitable for growing the dwarf modern varieties during the monsoon season. Another 35 percent of the area is of medium high elevation, which is flooded at a depth varying between 30-90 cm. Flood control and drainage facilities would be required to make this type of land suitable for growing modern varieties during the monsoon season. The remaining 29 percent of the area, which is flooded at a depth of more than 90 cm, is unsuitable for growing modern aman varieties. During the dry season there is inadequate moisture in the soil to grow rice except in the extreme low lying land which is used to grow local boro rice. During this season irrigation is needed for most of the land to grow modern varieties. By 1986-87 however only about 25 percent of the cultivated land was irrigated and 20 percent was irrigated by mechanical methods.

The Master Plan Organization has produced the following estimate of the economically viable water resource development potential which could be fully developed during the 1985-2005 period.

Table 5: The potential for development of water resources in Bangladesh, 1985-2005

	Incremental area during 1985-2005		Total area by 2005	
	Million acres	Percent of cultivated land	Million acres	Percent of cultivated land
Irrigation	8.70	40.2	13.46	62.1
Ground water	5.71	26.4	7.61	25.1
Surface water	2.98	13.8	5.85	27.0
Flood control and drainage	4.45	20.6	10.86	50.1

Source: MPO, National Water Plan, Vol. III p 15-12.

Thus, by the year 2005, the irrigation facilities could be increased to about 62 percent of the cultivated area and flood control and drainage facilities to about 50 percent of the area.

The following scenario of potential foodgrain production under alternative strategies for technological development is presented by the Master Plan Organization:

Table 6 : The projection of foodgrain production under alternative strategies and investment requirements Bangladesh, 1985-2005

Variables	Inputs only		Inputs plus minor irrigation development		Inputs, irrigation and flood control and drainage	
	1994-95	2004-05	1994-95	2004-05	1994-95	2004-05
Investment requirement (TK. billion)[a/]	3.8	4.6	62.1	112.5	73.2	141.4
Public sector	nil	nil	14.3	25.9	25.4	54.8
Private sector	3.8	4.6	47.8	86.6	47.8	86.6
Fertilizer use (million tons)	1.56	1.95	n.a.	n.a.	2.61	3.22
Foodgrain production (million tons)	18.8	19.30	24.46	27.29	26.00	30.69
Value of incremental foodgrain production (billion TK.)[a/]	21	25	65	87	77	113

Source: Compiled from MPO, National Water Plan Vol. III, various tables.

a/ At constant 1983 prices.

The projection shows that foodgrain production can be raised to 19.3 million tons by 2005, an increase of only 16 percent from the present level of 16.6 million, if emphasis is given only on intensive use of inputs. Most of this potential will in fact be exhausted by FY 94. But with investment on development of irrigation through minor equipments such as tubewells and power pumps, production could be increased to 27.3 million tons, and combined with large scale flood control, drainage and irrigation projects, to 30.7 million tons by year 2005. The public sector will have to bear the entire burden of the development of the flood control, drainage and irrigation projects, while the private sector is expected to bear about three-fourths of the burden of investment for the development of irrigation facilities.

Economic incentives

The extent to which the private sector will be induced to realize the above potential for technological development will depend on economic incentives for reallocation of land from traditional to modern crop varieties. Table 7 gives an estimate of cost and returns for traditional and modern rice varieties on the basis of a survey conducted by the Bangladesh Institute of Development Studies (BIDS) during 1987-88. The survey collected information for plots which were not affected by natural calamities, and hence it gives a picture of the normal situation. The estimates of profits are based on actual prices paid by farmers for inputs and the procurement price of output fixed by the government. The following conclusions may be drawn from the table.

Table 7: Estimates of costs of production and profitability in cultivation of traditional and modern varieties of rice, 1987-88

	Cash Costs		Total Cost b/		Family Income (TK per acre)		Business Profit (TK per acre)	
	Per acre of land (TK)	Per ton of rice (US dollar a/	Per acre of land (TK)	Per ton of rice (US dollar a/	Owners farms	Tenant farms c/	Onwer farms	Tenant farms
Dry Season:								
Local aus	1328	94	3171	225	2717	827	874	-1016
Local B. amon	1459	93	2950	188	3535	1435	2044	-56
Modern boro	4856	124	6548	167	6196	946	4504	-746
Wet Season:								
Local T. amon	1312	64	3067	151	4633	1903	2728	148
Modern amon	2645	87	4439	145	5903	1808	4109	14

Source: Estimated from unpublished data collected by the BIDS during 1987/88.

a/ US $1 = TK 31/50 is used as the conversion rate.
b/ Excluding land rent and interest on working capital.
c/ Includes as cost 50% of the gross paid to landowners.

Bangladesh has a comparative advantage in the production of rice. The cost of production per ton on rice for local varieties vary from US $151 (wet season) to $225 (dry season), compared to the current f.o.b. price of nearly US $300 per ton. The modern varieties have even lower per unit cost, by nearly 26 percent for the dry varieties season and 4 percent for the wet season varieties. Thus, by facilitating the adoption of modern varieties, the investment on irrigation and flood control could further reduce the unit cost of production.

Farmers can increase their profits by TK. 3,630 per acre during the dry season, and TK. 1381 during the wet season through reallocation of land from local to modern varieties.

172

Since land is scarce and family workers have to be maintained whatever the employment situation, the cultivator may be interested in maximizing the returns to family resources. Modern varieties give a better performance in this respect also. Reallocation of an acre of land from local to modern varieties will increase farm income by TK. 3480 during the dry season and TK. 1270 during the wet season.

Diffusion of the modern varieties will however substantially increase cash costs of cultivation. Since small farmers have liquidity constraints and limited access to financial institutions, it may discourage them to adopt modern varieties. Recent empirical studies however show that small farmers adopt modern varieties as much or even more than do the large farmers.

Sharecroppers of Bangladesh pay half of the gross product to landowners as rent. When this is included as cost, the profits become negative for local and modern varieties grown during the dry season. For wet season varieties tenants just break even. Thus, tenant farmers have hardly any incentives to grow rice under the existing terms and conditions, the tenant however continues to rent in land in order to reduce underutilization of family workers who have to be maintained irrespective of their employment situation.

For owner farmers, however, the present level of prices should give adequate incentives to reallocate land from local to modern varieties and hence for investment on irrigation. But the profit margin is frequently eroded by substantial reduction in yield caused by natural hazards and abnormal fall in prices during the post-harvest periods, often caused by inappropriate government policy regarding imports and intervention in the foodgrain markets. The above mentioned BIDS survey, for example, found that during the 1987 aman season, which was affected by a severe flood, the average yield of rice was 28 percent lower for local varieties and 19 percent lower for modern varieties, compared to the yield for the non-affected plots. During the 1977-88 period, the average monthly price of paddy for the May-July quarter, when the boro paddy is marketed, was lower than the price for the preceding February - April quarter, in 9 out of 11 years; and in six years the price was lower by more than 10 percent. Such a large-scale decline in prices and yields from the expected normal levels makes crop cultivation a highly risky venture. If farmers are averse to risk, i.e., they are not willing to sacrifice substantial normal income in exchange for a low probability of falling below the subsistence level -- which may be the case for a large proportion of farmers living in poverty -- the inducement to invest for development of the modern technology may be much less than that indicated by the figures on normal incomes and profits.

Institutional Constraints

The land tenure system under which farming is organized may also act as a constraint to fully realizing the growth potential.

There are very few large landowners in Bangladesh. The latest agricultural census (1983-84) noted that only 3.8 percent of the 13.8 million rural households owned land in sizes of more than 7.5 acres, while they controlled nearly 29 percent of the total land. About 11 percent of the land was in the hand of the top 0.8 percent of the households who owned holdings in sizes of more than 15 acres. At the other end, nearly 46 percent of the households owned less than 0.5 acres, who are termed as "functionally landless." This bottom half of rural households controlled 4.1 percent of the total land. The landownership is thus fairly unequally distributed.

The average size of a cultivated holding is very small and declined under the pressure of population, from 3.5 acres in 1960 to 2.27 acres in 1983-84. The small farm, defined as a cultivated holding of

less than 2.5 acres, which is incapable of producing a subsistence income at the present level of productivity, is the dominant production unit. They account for about 70 percent of the total farm holdings in the country but control only 29 percent of the total cultivated land. Small farmers also work as agricultural wage laborers and engage themselves in various non-farm activities during slack agricultural seasons in order to augment meager income earned from farming. The proportion of farmers operating more than 7.5 acres declined from 10.7 percent in 1960 to 5.1 percent in 1983-84 when they operated 26 percent of the total land.

Marginal landowners tend to cling to their tiny non-viable holdings owing to the existence of large surplus labor and the uncertainty of finding work in the labor market. They prefer to rent-in land in order to reduce underutilization of the family work force than to sell the land and work as full-time agricultural laborers. In 1983-84 nearly 37 percent of the 10 million farm households were tenants, mostly mixed tenants who own some land and rent in some more in order to make a viable holding. Only 1.4 percent of the farm households were pure tenants. In 1983-84 the proportion of cultivated land under tenancy was 19 percent, which is much less than the proportion of tenant farmers.

Sharecropping is the dominant tenancy arrangement, a verbal contract under which the tenant agrees to pay 50 percent of the gross produce as rent to the landowners, while the costs of the inputs are borne by the tenant. In some parts of the country, the landowner now shares the cost of fertilizer and irrigation with the tenant and in some areas the sharecropping is giving way to fixed-rent tenancy, in order to facilitate the adoption of modern varieties by the tenant. In the coastal districts of Barisal, Patuakhali and Khulna, which have remained technologically backward, the terms of sharecropping are more stringent. For traditional crops, the tenant pays two-thirds of the produce as rent, or an advanced cash rent negotiated every year in addition to half of the produce paid after the harvest. In 1983-84, 72 percent of the land in the tenancy market was transacted under sharecropping arrangement, 20 percent under fixed rent and the remainder eight percent under credit arrangement. Under this arrangement the borrower mortgages a piece of land to the lender who enjoys cultivation rights until the loan and the interest is repaid. The 1984 land reform provides for tenurial security for at least five years and one-third rent for the landowner who does not share the cost of inputs with the tenant. But because of the verbal lease contract, and the excess demand for land in the tenancy market, these provisions remain in paper.

The land is cultivated in excessively fragmented and scattered holdings. According to the 1983-84 agricultural census, an average small farm was fragmented into six plots, while a large one (over 7.5 acres) was fragmented into 19. The fragmentation of holding facilitates reduction of risk by distribution plots of different elevation and quality in the land portfolio of the farmer and allowing him to grow different crops. It however reduces the productivity of labor, makes labor management difficult and acts as a constraint to private investment on lumpy irrigation equipment and mechanization of cultivation.

Capital accumulation in agriculture is constrained by the scarcity of land, and the tendency on the part of the marginal landowners to cling to their tiny holdings. The previous section noted the existence of high rates of profits in the cultivation of rice particularly for modern varieties. But that rate of profit is not adequate to maintain a reasonable standard of living for most of the farmers. For 1987-88 the poverty level income is estimated at TK. 30,000 for a six member farm household. The amount of land the farmer is required to operate in order to earn the poverty level income under alternative cropping patterns is estimated below:

Table 8: Amount of land needed to earn poverty-level income under alternative cropping patterns

Land type	Cropping pattern	Household income per acre of land (TK. per annum)	Amount of land required to earn poverty level income (Acres)
A. Non-irrigated land	Local aus + local transplanted aman	7,350	4.08
B. Irrigated medium low land	Modern boro + local transplanted aman	10,830	2.77
C. Irrigated high land	Modern boro + modern aman	12,100	2.48
D. Irrigated low land	Modern boro (single cropped)	6,196	4.84

Depending on the elevation of the land and irrigation status, a size of holding varying from 2.5 to 5.0 acres is needed to produce the poverty level income. In 1983-84 there were only 8.5 percent of the households who owned more than five acres, and 20 percent who owned more than 2.5 acres. Thus, even at the existing high rates of profit, farming alone does not guarantee an acceptable standard of living for the large majority of the rural households.

Even if the rate of profit in farming is higher than that in non-farm activities, farmers would prefer to invest more in non-farm activities, because accumulation of capital in farming is constrained by the amount of land owned, while in non-agriculture profits can be reinvested for further accumulation. In-depth village studies often note that large landowners invest relatively less for capital accumulation in agriculture than do the small and medium landowners, and that the former divert agricultural surplus to conspicuous consumption, investment for human resource development and capital accumulation in non-farm activities.

The small farmer in Bangladesh also makes better use of farm resources and produces more per unit of land than the large farmer. The cropping intensity, the percent of land treated with fertilizer and the proportion of area irrigated, all are found to be inversely correlated with the size of holding. These findings make a strong case for introducing a redistributive land reform for achieving both equity in the distribution of agricultural income and efficiency in resource use. For example, if a land reform programme imposes a ceiling on ownership at 7.5 acres, an amount of 2.6 million acres of surplus land (about 12% of total land) would be available for redistribution. If the surplus land is redistributed among 5.6 million households, who own between 0.05 to 0.99 acres, each would

receive 0.47 acres, which will increase their average size of holding from 0.38 to 0.85 acres. The change in the pattern of land distribution, as a result of this reform would increase cropping intensity by four percent, the proportion of land treated with fertilizer by 3.5 percent and the proportion of area irrigated by 0.5 percent, remaining other things constant.

The sharecropping system and the insecurity of tenure implicit in the verbal lease contract, should produce strong disincentives to investment in agriculture and should lead to sub-optimal allocation of inputs. Since about a fifth of the land in Bangladesh in tenant-cultivated, a case could also be made for the "land to the tiller" type of tenancy reform, in order to reduce the inefficiency of resource-use. Most of the empirical studies conducted for Bangladesh however do not support the hypothesis of inefficiency of resource use under tenancy cultivation. In many cases, in fact, tenants are found to be relatively more productive than owner farmers. Thus, conferring ownership rights to the tenant may not increase productive efficiency. Such a reform would however save the tenant the 50 percent gross produce (about 10 percent of total crop production in the country) he pays to the landowner as rent, which the latter hardly reinvests in farming. This would increase the tenant's level of income and his capacity to invest relatively more for the adoption of the modern agricultural technology.

Since land is extremely scarce in Bangladesh, redistributive land reform cannot be a long term solution to the institutional problems in the country, though it may bring about some once for all improvement in equity and efficiency. The root of the problem is that too many people are trying to eke out a living from a meager amount of land. Unless job opportunities are created outside agriculture to absorb the additions to the rural population, the pressure on land will create further differentiation within the small-farm agriculture. This will make a case for further lowering of the landownership ceiling within a few decades. Thus, only rapid development of the non-farm sectors can improve economic conditions on the rural population in the long run.

Implications for strategy and policy

Since there is a serious land constraint to increasing crop production, the direct government involvement for development of irrigation, flood control and drainage facilities should continue. Owing to frequent severe floods, the growth in foodgrain production during the monsoon season is expected to remain low. This suggests that emphasis should be given on increasing production during the dry season for which irrigation is necessary. The MPO has projected that water resource development should receive nearly 10 percent of the projected annual development budget in order to increase foodgrain production at 2.9% per year during 1985-2005 period.

In spite of the high social rate of return, the private sector investment for irrigation development may not be forthcoming at the socially desired pace because of the scattered and fragmented small holdings, distorted price signals arising from short-term fluctuations in output prices, and simultaneous involvement of the public (in large scale projects) and private sector in this field. The government should regard water resource development as an infrastructure development activity and like physical infrastructure should take it as a public sector responsibility. Once developed the government may decide to lease out the facilities through competitive bidding to the private sector or to the cooperatives of the landless, in order to recoup the initial investment.

It is evident that the crop sector, even under most optimistic scenario, is unable to play a major role in absorbing the new entrants to the rural labor force. So productive employment opportunities have to be created outside the farm sector. In planning intra-sectoral allocation of resources within agriculture higher priority should therefore be given to the non-crop sectors. Since 1984 the allocation of public development resources for agriculture has been reduced from about 30 to 18

percent owing to elimination of input subsidies and provision of development grants for upazilas. Agricultures' allocation in the development budget should be raised to the pre-1984 levels, to meet the demand for the non-foodgrain sectors.

It is recognized that there are serious supply-side constraints to the growth of non-crop agricultural sectors, particularly of livestock. But there has been limited public efforts to overcome those constraints. Provision of loans to the landless for livestock and poultry raising, imports and domestic production of coarse grains as livestock feed, demonstration livestock and poultry farms at local levels, development of fish hatcheries and stocking fish seeds in open water bodies at government initiative, training of the unemployed educated youth in veterinary services etc. may be undertaken to promote the development of the livestock and fisheries subsectors.

About a third of the rural labor force is currently engaged in various non-agricultural activities, agro-processing, construction, trade, transport and personal and social services. This sector needs more attention and support from the government since it will play a crucial role in solving the employment problem. This sector now acts as an "employer of the last resort" providing part-time self-employment of the low productivity type, when the worker fails to get a remunerative job, or feels the necessity of working at leisure times, since the low wage rate cannot ensure subsistence income even at full employment. The long term viability of the sector depends on raising the productivity of labor in these activities. To achieve this goal, attention should be given on expanding basic education, training and development of human skills, generation and diffusion of appropriate technology and improved product design, dissemination of information about markets and improvement in marketing system.

A dynamic rural non-farm sector will need support from the government for development of infrastructure facilities. Regional concentration of development of irrigation facilities has led to specialization of cereal production in irrigated areas, and of non-cereal crops in non-irrigated areas. So marketed surplus of agricultural commodities has increased at a faster rate than production. The enlarged urban market has also stimulated the growth of marketed surplus for agricultural commodities and increased flow of urban goods to rural areas. The development of rural roads, markets, financial institutions, storage and processing facilities is necessary to strengthen linkage effects of agricultural growth. While the private sector will come forward to undertake some of these directly productive investments, the government should take the responsibility for development of all weather motorable roads and major market centers, to increase the profitability of private sector investments.

APPENDIX B

Industry and Trade: Performance and Outlook

APPENDIX B
Industry and Trade: Performance and Outlook

I. INDUSTRIAL DEVELOPMENT AND EXPORTS

A. Manufacturing and the Economy

Over the period FY 78 - FY 88, the share of the manufacturing sector in GDP has remained more or less stationary around 10 percent -- thus, the declining share of agriculture in GDP has been absorbed primarily by the services sector which in FY 88 accounted for approximately 4 percent of GDP. The growth rate of the manufacturing sector has been quite erratic. In two years, FY 83 and FY 88 growth rates were negative mainly because of floods. In other years growth rates ranged between 0.2 percent and 6.4 percent.

Table 1
Manufacturing and the Economy

	FY79	FY80	FY81	FY82	FY83	FY84	FY85	FY86	FY87	FY88
Manufacturing as a share of GDP	10.4	10.0	10.6	10.7	10.2	10.1	10.1	9.8	10.0	9.0
Growth rate of manufacturing in %	4.4	0.2	5.4	1.6	1.6	3.6	3.2	1.8	6.4	0.0
Total merchandise exports (in Million US$)	609.7	722.3	710.7	627.0	686.0	822.0	934.0	819.0	1074.0	1231.0
Growth rate of total merchandise export in %	24.5	18.5	-1.6	-11.9	9.6	18.2	15.2	-12.3	31.1	14.0
Value of manufactured export (in Million US$)	430.5	541.2	585.4	460.7	494.6	593.1	679.5	519.0	805.1	982.0
Share of manufactured export total exports in %	70.6	74.9	82.4	73.5	72.1	72.1	72.8	63.4	75.0	79.0

Total manufactured exports increased from US $609.7 million in FY 79 to US $1231 million in FY 88, while the share of exported manufactures in total merchandise exports increased in the same period from 70.6% to 79.8%. This trend is primarily due to increases in the export levels of textile products, which have offset declines in exports of jute manufactures and increases in exports of non-manufactured shrimp and fish products.

B. Structure and Development of Manufacturing Industries

1. Sectoral Composition

Food, textiles and petroleum products accounted for over 50% of the manufacturing value added in FY 79 and this predominance was maintained in FY 85. A cumulative growth rate for the period FY 79-FY 85 of over 30 percent, or over 1.76% average growth per annum, was exhibited by the following sectors: Food (1.78%), paper and paper products (1.82%), chemical products (1.79%), petroleum products (1.93%) and transportation equipment (1.82%). Non-metallic products exhibited a significant decline during the same period, with a cumulative growth rate of 31.6%.

Table 2
Gross Output and Value-Added Ratios

	FY 79		FY 85		FY 79-FY 85 Real Growth Rate	FY 79-FY 85 Average Annual Growth Rate	V.A to Gross Output
	Mill. Taka	% Share	Mills. Taka	% Share			
Food Manufacturing	3494	12.88	8760	12.53	31.9	1.78	0.239
Beverage and Tobacco Mfg.	2151	7.90	4490	6.41	8.8	1.43	0.146
Textile Manufacturing	8604	31.72	21240	30.38	23.0	1.68	0.265
Leather and Leather Footwear	1513	5.57	3109	4.45	7.5	1.39	0.130
kWood and Furniture	99	0.36	713	1.02	7.4	1.39	0.339
paper and Paper Products	910	3.35	2723	3.89	36.5	1.82	0.220
Drugs and Pharmaceuticals	1028	3.79	2814	4.02	30.6	1.76	0.323
Chemical Products	2216	8.17	6287	8.99	33.0	1.79	0.353
Petroleum and Petroleum Products	1943	7.16	7901	11.30	53.3	1.79	0.265
Plastic and Glass Products	293	1.08	734	1.05	24.3	1.70	0.324
Non-Metallic Products	445	1.64	643	0.91	311.6	1.78	0.154
Metal Products	3117	11.49	6472	9.26	8.5	1.42	0.203
Electrical Products	671	2.47	1542	2.20	17.7	1.61	0.305
Transport Equipment	353	1.30	1062	1.52	36.7	1.82	0.149
Other	280	1.03	1436	2.05	63.6	1.99	0.107
Total	27120	100.00	69917	100.00	26.3	1.71	0.245

As shown in Table 2, the ratio of value-added to gross output is in the range of 0.20 to 0.35 for most sub-sectors.

2. Capital Stock, Employment and Labor Productivity

Capital-output ratios, shown in Table 3 for manufacturing sub-sectors at the two-digit level identify the more capital-intensive activities in Bangladesh manufacturing: Paper and paper products (3.42), chemical products (4.67), and metal products (2.21). The sub-sectors exhibiting the lowest ratios of fixed assets to output are beverage and tobacco manufacturing (0.52), drugs and pharmaceuticals (0.81) and transport equipment (0.60).

Capital intensity as measured by capital-labor ratios is generally regarded as an important indicator of comparative advantage in manufacturing industries, with successful exporting sub-sectors exhibiting the lowest capital-labor ratios and high capital-labor ratios present in sub-sectors which have expanded through the benefit of import-substitution policies. Thus, we observe low capital-labor ratios in textile manufacturing (21 thousand Taka or US $805 per worker in FY 85) and leather products (9 thousand Taka or US $345 per worker in FY 85), while high capital-labor ratios are found in paper and paper products (133 thousand Taka or US $5103 per worker in FY 85), chemical products (475 thousand Taka or US $18227 per worker in FY 85), petroleum products (180 thousand Taka or US $6907 per worker in FY 85) and metal products (101 thousand Taka or US $3875 per worker in FY 85).

TABLE 3
CAPITAL-OUTPUT AND CAPITAL-LABOR RATIOS

	Capital Stock FY85 Million Taka	FY85 Capital Output Ratio	FY85 FY85 Number of Employees	FY85 K/L Taka per Worker	FY85 K/L US$ per Worker	FY85 Labor Productivity Thous. Taka per Worker	FY85 Labor Productivity US$ per Worker
Food Manufacturing	2626	1.25	45700	57000	2187	192	7384
Beverage and Tobacco Mfg.	344	0.52	7274	47000	1803	616	23637
Textile Manufacturing	6215	1.10	302513	21000	805	07	268
Leather and Leather Footwear	454	1.12	5030	9000	345	618	23769
Wood and Furniture	353	1.45	3757	94000	3607	19	729
Paper and Paper Products	2050	3.42	15471	1333000	5103	176	6753
Drugs and Pharmaceuticals	737	0.81	14186	52000	1995	198	7598
Chemical Products	10361	4.57	21800	475000	18227	288	11051
Petroleum and petroleum Products	109	0.05	608	180000	6907	12966	497544
Plastic and Glass Product	345	1.45	6812	51000	1957	108	4144
Non-Metallic product	137	1.39	2764	50000	1918	233	8940
Metal Product	2924	2.21	28919	101000	3875	224	8615
Electrical Prodcts	320	1.01	6576	48000	1842	234	8979
Transport Equipment	95	0.69	4375	22000	844	243	9324
Others	96	0.62	2821	34000	1304	509	19531
Total	**27170**	**1.58**	**468606**	**58000**	**2225**	**149**	**5717**

Significant investments have taken place over the last decade in key industrial sectors: food manufacturing textile, manufacturing leather and leather footwear, paper and paper products, rubber, plastic and glass products, and non-electronic metal products. These increases in fixed capital were due to expansion in some cases (e.g leather paper and paper products) and in some cases due to Balancing Modernization and Reconstruction (BMR) as is the case, for example, of textile manufacturing. The sub-sector in which significant investments took place in the period FY 79-FY 85, show corresponding increases in gross output; the only exception is given by the petroleum and petroleum products sub-sector, where gross output has increase by about 40 percent with a rise in fixed capital of about 2 percent.

The wage bill increased an average of 11 percent in nominal terms during the period FY 79-FY 85, with 4.9 percent attributable to a larger number of man-days worked and 112.1 percent due to higher wages. The number of workers employed in manufacturing industries rose from 400,670 in FY 79 to 468,606 in FY 85, an increase of 16.9 percent, while man-days worked rose in the same period from 97.85 to 102.68 million. The largest increases in employment have occurred in the textile manufacturing sub-sector.

II. TRADE AND TRADE POLICIES

A. Manufacturing Sector and Foreign Trade

Table 4 summarizes the relationship between the manufacturing sector and its share in foreign trade. The share of manufactured exports in total merchandise exports has increased from 71 percent in FY 79 to 79.8 percent in FY 88. A similar trend can be found in the share of manufactured imports in total merchandise, which increased from 71 percent in FY 79 to 86 percent in FY 88. The increasing trend in the share of manufactured imports in total merchandise imports. The increasing trend is much more prominent in the share of manufacturing imports in the total supply of manufactured goods consisting of domestic manufactures and manufactured imports -- from a share of 38.4 percent in FY 79 it increased to more than 45 percent in the late eighties.

B. Structure and Composition of Exports

The structure and composition of exports from Bangladesh are shown in Table 5. It can be seen that, over the years, there has been a spectacular increase in the share of non-traditional exports in total merchandise exports. For example, whereas in FY 79 the share of non-traditional items total exports was 12.3 percent, it had increased to 47 percent by FY 88. Exports of ready-made garments increased from US $0.10 million in FY 79 to US $434 million in FY 88. During the same period, fish, shrimp and frogleg exports increased from US $36 million to US $14.5 million. It is important to note that in both these subsectors, the leading role has been taken by private entrepreneurs. Meanwhile, exports of traditional jute products have gradually declined, and those of leather, includinng raw leather and leather goods, has increased from 14 percent in FY 79 to 26 percent in FY 88 as a share of traditional exports. It can be expected that in coming years, non-traditional items like fish, shrimp, froglegs and ready-made garments will have the major potential for export growth.

C. Structure and Composition of Imports

The structure and composition of imports is presented in Table 6 for the period FY 79 to FY 88. Foodgrain imports can be seen to account for about 15 to 20 percent of total imports. In physical volume, this amounts to about 1.5 to 2.0 million metric tons per year. Over the years, the share of capital goods has remained more or less unchanged at 26 percent. Except for FY 87 and FY 88, intermediate goods accounted for about 26 to 30 percent of total imports. Those two years are exceptional because of severe floods and the demand for intermediate goods was reduced as a result of reduced production and reduced demand. Within intermediate goods, fertilizer imports have been reduced in recent years as a result of two new fertilizer plants and corresponding increases in domestic production.

D. Export Incentives

The major components of the current export policy package, aside from the exchange rate adjustment policy are:

1. Provisions for ensuring unrestricted and duty-free access to imported inputs-
   a. Providing access to banned and restricted imported categories for export industries;
   b. Duty drawback arrangements;
   c. Bonded warehouse facilities;
   d. Cash compensation arrangements in lieu of duty drawback or bonded warehouse facilities.

TABLE 4
MANUFACTURING SECTOR AND FOREIGN TRADE

	FY79	FY80	FY81	FY82	FY83	FY84	FY85	FY86	FY87	FY88
1. Value of Total Manufacturing Production (in Million US Dollars)	1781.5	2247.0	2498.0	2376.7	2130.5	2486.6	2682.9	2291.4	2420.9	2225.8
2. Value of Manufactured Imports (in Million US Dollars)	1111.0	1337.0	2063.0	2064.0	1717.0	1734.0	1937.0	1956.0	2180.0	2270.0
3. Value of Total Supply of Manufactured Goods (in Million US Dollars)	2893.0	3584.0	4561.0	4441.0	3848.0	4221.0	4620.0	4247.0	4601.0	4496.0
4. Value of Manufactured Exports (in Million US Dollars)	430.5	541.2	585.4	460.7	494.6	503.0	679.5	519.0	805.1	982.3
5. Total Merchandise Exports (in Million US Dollars)	609.7	722.3	710.7	627.0	686.0	612.0	934.0	819.0	1074.0	1231.0
6. Total Merchandise Imports (in Million US Dollars)	1556.0	2372.0	2533.0	2504.0	2246.0	2353.0	2647.0	2364.0	2620.0	2987.0
7. Share of Manufactured Exports in Total Exports (in %)	70.6	74.9	82.4	73.5	72.1	72.1	72.8	63.4	75.0	79.8
8. Share of Manufactured Imports in Total Imports (in %)	71.3	56.4	81.4	82.4	76.4	73.7	73.2	82.7	83.2	86.0
9. Share of Manufactured Imports in Total Supply of Manufacturing Goods (in %)	38.4	37.3	45.2	46.5	44.6	45.9	41.9	46.1	47.0	4[illegible]

TABLE 5
STRUCTURE AND COMPOSITION OF EXPORTS
(in Million US Dollars)

	FY79	FY80	FY81	FY82	FY83	FY84	FY85	FY86	FY87	FY88
1. Traditional Exports	535	627	563	495	533	628	672	511	571	568
Raw Jute	143	144	119	102	110	117	151	124	104	81
Jute Goods	276	384	366	292	318	357	390	293	302	301
Tea	41	33	41	38	47	69	61	33	30	39
Leather	75	66	57	63	58	85	70	61	135	147
2. Non-Traditional Exports	75	96	128	132	153	183	262	304	503	663
Fish, Shrimp and Froglegs	36	38	40	53	72	77	87	113	136	145
Ready-made Garments	0.1	0.65	3	7	11	32	116	131	299	434
Other	38.9	57.35	85	72	70	74	59	60	68	84
3. Total	610	723	711	627	686	811	934	815	1074	1231

TABLE 6
STRUCTURE AND COMPOSITION OF IMPORTS
(in Million US Dollars)

	FY79	FY80	FY81	FY82	FY83	FY84	FY85	FY86	FY87	FY88
1. Food	257	716	342	356	469	485	601	355	388	626
Foodgrains	197	623	250	285	386	398	498	220	273	489
Edible Oil	60	93	92	71	83	87	103	135	115	137
2. Intermediate Goods	417	617	781	788	656	641	662	609	416	514
Petroleum	179	383	503	547	456	356	359	342	230	272
Fertilizer	134	134	104	104	66	75	137	108	25	46
Raw Cotton, Yam	78	64	141	106	90	173	140	102	97	136
Cement	26	36	33	31	44	37	26	57	64	60
3. Capital Goods	415	545	689	615	655	599	616	691	1003	774
4. Others	467	494	721	745	466	628	768	709	813	1073
5. Total	1556	2372	2533	2504	2246	2353	2647	2364	2620	2987

2. Provision of an Export Performance Benefit (XPB).
3. Provisions for ensuring easy and subsidized access to export finance.

    a. Provisions for importing under back-to-back letter of credit;
    b. Provisions for internal procurement under inland back-to-back LC arrangements;
    c. Provisions for export credit at reduced interest rates.

4. Income tax rebates
5. Duty concessions for imported capital machinery.

Evaluation of policy instruments with regard to export incentives along with the norm situations against which they were evaluated are outlined in Table 7. The estimates suggest the following features of current export policies in actual operation:

1. Current export policies provide positive assistance to all export products except frozen fish and PVC cables and conductors (Table 8). The frozen fish sector appears to be negatively assisted by a considerable amount -16.4 percent of value added and -35.6 percent of operating surplus. The PVE cables and conductors producing industry receives a significant negative assistance which constitutes about 40 percent of the operating loss the industry incurs on exporting activity.

2. The structure of assistance received by the positively assisted export products, as evident in Table 8, shows that finished leather and ready-made garments are activities which are relatively highly assisted by current policies. All other activities are moderately assisted.

3. Table 8 also shows that even in the current situation, when values of the XPB are considerably reduced when compared to its values in past years, XPB does make a considerable difference to the level of assistance received by export activities.

4. The last two columns in Table 8 are significant in that they show what assistance is received by the activities if policies consist of only those measures which are aimed at offsetting the taxes on inputs. The estimates of ERAs here are without XPB, interest subsidies and income tax rebates. These estimates are all negative except in the case of specialized textiles where the ERA is nearly zero. These estimates provide the evidence of gaps existing in the current policies aimed at providing offsets to taxes paid on imported inputs or implicit taxes borne (in the form of higher protected prices paid) on domestically purchased inputs.

On the export incentives, the following conclusions can be derived from the available evidence:

1. Existing policies do not fully assure unrestricted and duty-free access to inputs.

2. The additional incentives provided, such as XPB, interest subsidies and income tax rebates work in part to compensate for the inadequate offset provisions on taxes on imported inputs.

3. The general level of overall assistance received by export activities is moderate, only a few percentage points above zero.

4. Current incentives seem to be biased despite some differentiations maintained in XPB rates to provide a higher benefit to higher value-added generating activities.

TABLE 7

Export Incentive or Disincentive	Norm Situation	Direction of Effect of Export Incentive or Disincentive
Concessionary duty on imported machinery	No-duty situation	Negative
Access to foreign exchange for importing at the official exchange rate or provision for importing on back-to-back LC basis	Importing at the official exchange rate	Positive: from negative toward the norm situation
Access to foreign exchange for importing at the secondary exchange market rate	Importing at the official exchange rate	Negative
Access to duty-free imports under bonded warehouse system or national duty drawback	No-duty situation	Positive: from negative toward the norm situation
Duty drawback received on duty-paid imports	No-duty situation	Positive: from negative toward the norm situation
Shortfall in duty drawback received	No-duty situation	Negative
Protection on domestic purchases of inputs	Domestic purchases at border prices	Negative
Access to bank credit at concessional interest rate	Bank borrowing at the 14% interest rate	Positive
XPB received	Getting no Subsidy	Positive
Income tax rebate	Income tax payment normal rate	Positive

TABLE 8

EFFECTIVE RATES OF ASSISTANCE (ERA)

(in %)

Product		Overall ERA		ERA without Export Performance Benefits (XPB)		ERA without XPB, Interest Subsidy and Income Tax Rebate	
		On Value Added (VA) Basis	On Operating Surplus (OS) Basis	On VA Basis	On OS Basis	On VA Basis	On OS Basis
X.11	Readymade Garments	25.42	37.55	13.92	220.56	-1.31	-1.94
X.02	Readymade Garments	25.18	38.96	16.80	25.99	-0.80	-0.12
X.03	Readymade Garments	24.98	45.26	10.68	19.36	-3.89	-7.04
X.04	Finished Leather	72.99	128.23	25.54	44.87	-13.89	-24.39
X.05	Froglegs Fish	-16.38	-35.61	-21.24	-46.18	-25.40	-55.22
	Glicerine	9.08	9.90	6.65	7.25	-4.24	-4.63
	Porcelain Tableware	6.67	7.70	3.28	3.79	-1.58	-1.83
	PVC Pipes	8.49	9.59	3.16	3.58	-9.00	-10.17
	Textile Fabric and Household Liner	6.92	10.04	0.07	0.39	0.07	0.39

5. Indirect export producers selling under international tender are relatively disadvantaged compared with the direct export producers as they seem unable to fully avail themselves of existing incentives.

6. Export firms which are not fully export- oriented also seem particularly disadvantaged as they cannot fully avail themselves of the current incentives.

E. Current Import Regime

In spite of some trade policy reforms undertaken over the last 2 or 3 years, the import regime remains fundamentally highly controlled by generally high import tariff rates and/or quantitative restrictions. Table 10 summarizes current import tariff rates for a cross-section of representative products. Most products included in the table have tariffs higher than 85 percent, some have tariffs between 64 and 85 percent while only a few have tariffs lower than 64 percent. The products included in the table would cover a fairly good share of the import-substituting production activities carried on in Bangladesh. This high set of tariffs remain on most products despite tariff reductions effected during last two years. In the case of a number of products, tariff reductions have not gone for enough and many of the products covered in theses reductions are primary materials or intermediate product. Final consumer goods have been seldom touched. In many cases, tariff reductions on final-stage and intermediate products have not been carried out in a synchronized manner so that resulting effective protection levels that can be enjoyed by domestic production activities (producing final stage products) remain inordinately high or have even become worse than before in some cases.

Trade policy reforms of the last two years have also included relaxation of extensive bans and quota restrictions of imports. Yet bans and restrictions with elaborate listings of items in the Negative and Restricted Lists still remain the fundamental feature of import policy and the incentive for protecting domestic import-substituting production.

F. Anti Export Bias

Despite special export promotion policies, the overall trade policy regime in Bangladesh has remained biased against export activities. The special export promotion measures have been grafted on to a policy regime characterized by wide quantitative restrictions and/or high tariffs on imports. These policies provide much higher levels of effective assistance to import-substitution activities than what are found to be received by export activities. Export industries are hurt also because of the absence of unrestricted access to imported inputs. Furthermore export activities are hurt by the adverse indirect effects of a controlled regime on the exchange rate. The exchange rate remains depressed or over-valued in such a policy regime, which lowers exporter's revenues. The effective exchange rates (ERR) for imports, all exports and non-traditional exports have been calculated for the years FY 86 through FY 89 and are presented in Table 9.

TABLE 9
EFFECTIVE EXCHANGE RATES FOR IMPORTS AND EXPORTS (TK./US $)

		FY 86'	FY 87'	FY 88'	FY 89'
i.	EER for Imports	41.579	43.247	44.007	46.240
ii.	EER for all Exports	32.290	33.225	33.786	34.477
iii.	EER for Non-traditional Exports	31.510	32.192	32.843	33.643

TABLE 10

FY89' IMPORT TARIFFS ON SELECTED PRODUCTS

(in %)

Product	Customs Duty	Sales Tax	Total Tariff including Development Surcharge and Import License Fee
M.S. Billets	30	10	51.5
M.S. Plates & G.P. Sheets	30	20	64.5
C.I. Sheets	50	10	73.5
M.S. Rods	50	20	88.0
M.S. & G.I. Pipes	50	20	88.5
Nails	150	20	208.5
Screws, Bolts, Nuts etc.	50-150	20	88.5-208.5
Copper Wire	50	10	73.5
Table & Kitchen Ware	150	20	208.5
Aluminium Tubes & Pipes	50	20	88.5
Pumps	50	20	88.5
Diesel Engines & Motors	20	20	52.5
Parts of Motor Vehicles	50	20	88.5
Electric Motors	50	20	89
Air-conditioners	100-150	20	148.5-208.5
Refrigerators	50-100	20	88.5-208.5
Micro-computers	10	0	18.5
VCR Apparatus	100	20	148.0
Radios & Televisions	30-100	20	64.5-148.5
Electric Bulbs & Tubes	100	20	148.5
Insulated Electric Wires	150	20	208.5
Motor Cars	50-150	20	88.5-208.5
Buses, Trucks, Jeps etc.	20-50	10-20	40.5-88.5
Bicycles	150	20	208.5
Motorcycles	50	0	58.5
Electric Transformers	50	0	28.5
Raw Silk & Yarn	50	20	88.5
Cotton Yarn	20	15	46.5
Synthetic Yarn	20	20	52.5
Woven Fabrics	100	0-20	108.5-148.5
Sanitary Ware	150	20	208.5
Sugar	100	20	148.5
Edible Oil	50	20	88.5
Sheet Glass	150	20	208.5
Paints & Varnishes	50-100	20	88.5-148.5
PVC Pipes	50	20	88.5
Miscellaneous Medical Products	20	0-20	28.5-52.5
Fertilizer	0	0	0 0
Cotton	0	0	0 0
Ceramic Tableware	150	20	208.5
Cement	20	0	29
Toiletries & Cosmetics	100-200	20	148.5-268.5
Miscellaneous	50	20	88.5
Battery Other than Simple Cells	150	20	208.5
Paper	100	20	148.5
Paper Rubber, Rubber Products	50-100	20	88.5-148.5

Note: Total Tariff = CD + ST (1+D) +DSC + ILF

Where,

CD = Customs Duty
ST= Sales Tax
DSC = Development Surcharge = 6%
ILF = Import License fee = 2.5%

140

The estimated EERs suggest an anti-export bias of about 30 percent for all exports and of over 30 percent for non-traditional exports. The results also suggest no perceptible decline in the bias during the period considered. Non-traditional exports do not seem to be especially favored against traditional jute and jute goods which are getting a larger level of assistance because of a considerably higher interest subsidy. In all likelihood, the above estimates of anti-export bias are conservative because (a) scarcity premiums for imports subject to quantitative restrictions (b) the effective tariff rate on dutiable imports is lower than the statutory tariff rate.

Table 11 presents summarized estimates of effective protection or assistance for selected products in import-substitution and export-promoting industries. The general average level of such assistance is considerable higher for import-substituting industries than that received by export products. This information confirms the existence of considerable anti-export bias in existing policies.

G. Export Credit and Import Financing

Table 12 presents data on the amount of export credit provided by financial institutions for the period June, FY 84 to June, FY 88. Raw jute and jute goods still account for 56 percent of export credit supplied. Even though the non-traditional items contribute about 54 percent of country's total export earnings, their share in export credit by financial institutions is only 22 percent. Between FY 84 and FY 88 advances to jute goods export have increased by 300 percent whereas the comparable figure for garments is only 143 percent.

Import financing by financial institutions is presented in Table 13. As identifiable separate items, raw materials accounted for 18 percent of total import financing by financial institutions. In terms of growth rates, between FY 84 and FY 88 institutional import financing of raw materials increased by 247 percent, while those of consumption articles and machinery and equipment grew by 41 percent and 28 percent respectively.

TABLE 11
ERA RECEIVED BY SELECTED IMPORT-SUBSTITUTION
AND EXPORT PROMOTING INDUSTRIES
(in %)

Industry	Effective Assistance
A. Import Substitution Group	
Steel and Engineering	
- M.S. Billets, M.S. Plates and C.G.I. Sheets	Infinite (-Value added at Border price)
- M.S. Rods, G.I. Pipes	260-411
- Television (B/W)	290
- Electrice Motors, Diesel Engines and Elictric Components	31-33
- Electronic Transformers	7
Chemical and Allied Products	
- Sulphire Acid, Hydrocboric Acid, Chromum Sulphat	142-366
- Sanitary Ware	435
- Paper and Rubber Products	Infinite
- Cement	2
- Fertilizer	Negative or Low
Agro-based Products	
- Sugar	407
- Edible Oil	978
- Cigarattes (Int. brand)	-43
- Footwear (leather)	-31
Textiles	
- Cotton Yarn	113-513
- Nylon Yarn	181
- Reyan and Silk Yarn	Infinite
- Woven Fabrics	115-213
- Clothing	197-318
B. Export Group	
- Readymade Garments	25
- Finished Leather	73
- Frozen Fish	16
- Glycerine	9
- Ceramic Tableware	7
- PVC Pipes	8
- PVC Cables and Wires	Negative
- Textile Fabric and Household	7
- Jelly, Ketchup and Pineapple Juice	-2 to 4
- Silk Fabric	16
- Cotton Vests	19
- Nylon Socks	11
- Newsprint	35

Source: Rob (1989)

TABLE 12
EXPORT CREDIT
(In Million Taka)

Product	June '84	June '85	June '86	June '87	June '88
Raw Jute	1094	1005	2980	2460	2780
Jute Goods	644	3143	1578	1793	1865
Tea	174	190	164	257	301
Hides and Skin	274	335	327	393	479
Paper and Paper Products	0.1	16	82	145	151
Ready-made Garments	210	353	575	488	510
Fish, Shrimps & Froglegs	372	430	650	962	1074
Handicrafts	4	6	125	22	46
Others	1835.9	1763	1994	949	1094
Total	4608	7241	8475	7469	8300

TABLE 13
IMPORT FINANCING
(In Million Taka)

Product	June '84	June '85	June '86	June '87	June '88
Raw Materials	542	1005	1686	1904	2150
Machinery and Equipments	782	973	873	925	1007
Chemicals, Drugs and Medicine	281	348	377	558	610
Consumption Articles	420	544	508	500	595
Others	2651	3413	4844	6814	7262
Total	4676	6283	8288	10701	11624

APPENDIX C

Evolution of the Policy Environment

APPENDIX C
Evolution of the Policy Environment

INDUSTRIAL POLICY -- PRIVATIZATION

POLICIES	GOALS	STRATEGIES
National Industrial Policy (NIP) 1975	Divestment and nationalization	Enhancement of private sector investment from Tk. 30 million to Tk. 100 million. Number of industrial sectors reserved for public ownership was reduced.
	Divestment and - privatization of assets abandoned by former owners and taken over by the government	No provision for any subsequent program of nationalization.
	Denationalization - privatization of assets which were nationalized by the government under a separate law irrespective of ownership	Between 1975-82, 326 industrial units were divested.
National Industrial Policy (NIP) 1982	Acceleration of privatization process	Returning of nationalized jute and textile mills to their owners. 35 jute and 25 textile mills were handed over to their former Bangladesh owners by February, 1983.
		Selling of shares of different industrial units to the public.
		Formulation of a more flexible private investment schedule and a less complicated approval system. A mid-term revised industrial investment schedule was published envisaging an investment of Tk. 13594 million covering 110 sectors under 13 major groups for medium and large industries. Another schedule for small and cottage industries was also prepared by BSCIC involving a total investment of Tk. 4000 million. Industrial

		projects requiring DFI and other bank finance would not require clearance or prior permission of DGI. Time limit for sanctioning projects by relevant authorities has been fixed up-DGI is to sanction the project in 2 months and financing agencies in 3 months time from the receipt of a fully documented application. Increasing the sectors free for private investment from 19 to 50. Increasing the power of different approval bodies and industrial financial institutions. The sanctioning power of commercial banks was increased from Tk. 2.5 million to Tk. 15 million, that of Bangladesh Industrial Bank from Tk. 30 million to Tk. 40 million and that of Director General, Development of Industries from Tk. 5 million to 20 million.
National Industrial Policy (NIP) 1986	Encouraging private initiatives in the industrial sector	Confinement of the role of the public sector to 7 basic and large-scale industrial subsectors such as defence equipments, electricity, forest plantation, telecommunication (excluding distribution and services), transport and railways. Opening up of the rest of the economy as free sectors for private investments. Formulation of a priority activity schedule for the next 3 years which includes agro-based industries; textile industries; tannery, leather and rubber products;

POLICIES	GOALS	STRATEGIES
		chemicals, pharmaceuticals and allied industries. Simplification of approval procedures for private sector projects especially those which use their own funds. For projects up to Tk. 30 million, DGI will have the sanctioning authority. The Investment Board can sanction projects up to TK. 300 million. If the project is beyond Tk. 300 million only then will it go to the National Committee for Industrial Development. Identification of sectors for foreign investment, formulation of a relevant priority industries schedule, and encouragement of foreign private investment through joint ventures. List of foreign investment would include chemicals, engineering, textile, food and allied products sectors. Foreign investment to the extent of 100 percent of ownership is allowed in the Export Processing Zone. Foreign investors enjoy the facility of duty free imports of capital goods, raw materials and exports.
Board of Investment (BOI), 1988		Setting up of Board of Investment (BOI) to encourage private investment in the country. The BOI will have representation both of public and private sectors and will process quickly the applications for private investment. In FY 89, 125 out of 144 industrial sub-sectors were opened for private investment.

INDUSTRIAL POLICY -- PUBLIC ENTERPRISES

POLICIES	GOALS	STRATEGIES
	Increase productivity and efficiency in the public sector	Transform the public enterprises into holding companies with 51 percent of their shares being retained by the government and 49 percent of them being sold to the workers and the general public. Sixteen such enterprises have been identified of which six were successfully marketed by FY 88. To ensure ownership by the workers, of that 49 percent, 35 percent will be reserved for workers. Greater executive power and autonomy to public enterprises in the areas of pricing and production decision. Public enterprises since FY 84 can determine their own production targets and can change the prices of their products within a range of 10 percent without prior government approval. Since FY 88, only 4 monopolies and sensitive items are formally subject to price controls. These are fertilizer, sugar, paper and newsprint. The other public enterprises can freely set prices for their products. Withdrawal of subsidy to public enterprises to make them competitive commercial entities. By FY 87 there was no subsidy for jute manufacturing, and there were reductions in subsidy rates by 74 percent, 45 percent, and 20 percent in limit prices of

POLICIES	GOALS	STRATEGIES
		gasoline, kerosene and natural gas to commercial entities, respectively.
		Incentive package for workers linked to performance (e.g. bonus to productivity).
		Appointment of management contracts for large losing public enterprises. There has been no subsidy to the public jute manufacturing sector or other sectors since 1979.

INDUSTRIAL POLICY -- SMALL SCALE INDUSTIRES

POLICIES	GOALS	STRATEGIES
	To increase role of small and cottage industries in the areas of production and employment creation	Strengthening the power, autonomy and financial capability of Bangladesh Small and Cottage Industries Corporation (BSCIC). In NIP, FY 82 an investment schedule for small and cottage industries was prepared by the (BSCIC) which involved a total investment of Tk. 4000 million. Since FY 86 BSCIC has had all the sanctioning power for setting up small and cottage industries. Setting up of industrial estates in every district headquarter with the necessary infrastructural facilities to promote small and cottage industries. (Speech, Minister of Industries, December, 1988) Establishment of a specialized Bank (BASIC) geared to meet the credit needs of small entrepreneurs in 1988. Special tax advantages for small entrepreneurs. Since FY 87, the interest rate for credit to small entrepreneurs has been fixed at 10 percent while the general lending rate is 16 percent. Measures to train entrepreneurs in management as well as technical know-how. Make entrepreneurs export oriented. For example, since FY 87 income from exports of handicrafts has been completely exempt from income tax (a special case).

POLICIES	GOALS	STRATEGIES
		Setting up of one step service centers where small entrepreneurs would be extended assistance and to ensure this, the Investment Help Unit for the small scale sector would be set up at each district headquarter.

INDUSTRIAL AND TRADE POLICY

POLICIES	GOALS	STRATEGIES
Investment Sanctioning	Liberalize and simplify investment procedures	Increase authority of financial institutions to sanction investment. Rationalize number of regulatory bodies. (See NIP, FY 86) Strengthening the Dhaka Stock Exchange for share trading. Setting up Export processing zone (EPZ) in Chittagong for export-oriented joint ventures. Income tax benefit if black money is invested. For the first time, in FY 87 a 20 percent income tax was imposed on all unreported income. The rate was reduced to 10 percent in FY 88 and was retained in FY 89. During the last two fiscal years, it resulted in reporting approximately Tk. 500 million.
Tariff Reforms	Reduce disparities in effective protection	Reduce level and rationalize structure of tariffs in the textile, steel, engineering, chemical and electronics industries. In FY 86 the Government reduced the number of tariff rates from 24 to 11. In FY 88, as a part of a three year phased program to rationalize tariff structure, the maximum nominal tariff (defined to include the development surcharges customs duty and sales tax)

POLICIES	GOALS	STRATEGIES
		for most final goods imports in the textile, steel, engineering, chemicals and electronics sector was reduced from over 200% to 125%.
		Reduce maximum customs duties to 20 percent for raw materials, 75 percent for intermediate goods and 100 percent for finished goods.
		Continue reducing number of rates of customs duty and sales tax. By FY 88 the number of such rates was reduced from 24 to 11.
	Regional Industrialization	Special tariff rates on machinery and spare parts if industries are set up in less developed and least developed areas of the country as identified by the Planning Commission. Effective FY 83 a concessionary duty of 2.5 percent is applicable to capital machineries imported for the least developed areas. The corresponding figures for less developed and developed regions are 7.5 and 20 respectively.
Import liberalization	Liberalize imports in order to facilitate industrial production	Eliminate negative and restricted lists for industrial imports, except for items controlled for reasons of regional and public safety and a small number of highly sensitive items. In FY 86 the positive list of items specifically permitted to be imported was replaced by a negative and restrictive list. By the end of FY 88 the number of banned items was reduced from 388 to 355. The list of banned items has been progressively reduced from 39% of import categories in FY

POLICIES	GOALS	STRATEGIES
		86 to 28% in FY 88. The corresponding figures for the restricted list are 28% and 24%

EXTERNAL SECTOR POLICY

POLICIES	GOALS	STRATEGIES
Exchange rate management	Strengthen the balance of payments position	Continue to manage the exchange rate flexibility to ensure competitiveness and promote export diversification.
	Unification of dual exchange market	Increase share of transactions conducted in the secondary exchange market. The share of the wage earners' scheme market in total imports has increased from 13 percent in FY 82 to 40 percent in FY 88.
		Reduce the gap between the official and secondary market rates to 2 percent. The differential now stands at 5 percent.
External debt management	Contain debt service at sustainable levels	Limit non-concessional borrowing to exceptional circumstances. Due to disastrous floods in FY 88 Bangladesh resorted to IMF emergency borrowing facilities for $9.7 million.
Exchange Aid utilization	Raise utilization rate of the aid pipeline	Increase availability of local resources for development projects. In reality local resources as a percentage to total resources have declined from 25% in FY 81 to 11% in FY 89.
Exchange and payment restrictions.	Eliminate multiple currency practices	Abolish Bangladesh Bank deposit requirement on import letters of credit.

EXTERNAL SECTOR POLICY -- EXPORT PROMOTION

POLICIES	GOALS	STRATEGIES
Export promotion	Promote export led development	A. Provisions for ensuring unrestricted and duty free access to imported inputs
	Free trade system for exporters	Access to banned and restricted import categories for export industries.
	Produce backward linkages from exporters to other firms	Duty draw back arrangements
		Bonded warehouse facilities
		Cash compensation arrangements in lieu of duty drawback or bonded warehouse facilities
		Since FY 86, when negative and restricted (import) lists were introduced, the import policy order of each year has specified restricted import items which are exclusively permitted for the export industries. The exporters only need a utilization permit.
		The decision to accord a free-trade status to export producers was adapted on the eve of Bangladesh's independence through provisions introduced for providing refunds of duties paid on imported inputs used in manufactured exports. The type introduced initially was a drawback of actual duties paid. It came into being in 1970. The decision to extend duty drawback facilities to local suppliers of export producers or against international tender was taken in FY 82. This

POLICIES	GOALS	STRATEGIES
		decision was firmly implemented in FY86. In FY 88 a decision was taken to extend the drawback benefits to local suppliers against back-to-back LC arrangements. Apart from actual duties paid, subsequently two other types of drawbacks at flat rates and at national payments, came into use. The government decided to introduce a system of national payment of drawbacks of customs duty sales tax in 1983, whereby exporters were to be empowered to clear imported inputs without paying any duty and sales tax. A flat rate drawback system was introduced in 1981 applied to 13 export products at the time. Under this system, exporters can claim drawback of duty and sales tax at certain flat rates of the value of the export goods or imported inputs. Exporters can opt for a straight authorization to import duty free into established special bonded warehouses. This privilege, introduced in 1984, has remained confined to firms in few industries. In 1987, a cash subsidy at the rate of 15 percent of the FOB value of export was introduced for ready made garment manufacturing units as an alternative scheme to compensate the taxes paid on imported materials. This year it has been extended to hoisery and specialized textiles.

B. Provision of Export Performance Benefits.

Since the seventies exporters have been granted subsidies in the form of an export performance license (XPL) and import entitlement certificate (IEC). The system was simplified in FY 86 with the introduction of a system of export performance benefits (XPB). In the mid-seventies, 42 non-traditional items were converted by XPL/XPB, and since FY 83, all non-traditional items have been brought under this scheme. Different rates of XPL/XPB entitlements have been applied to different products and the rates have been varied over time. Before FY 82, four different entitlement rates ranging from 10 to 40 percent were in effect, in FY 83 three rates (40, 60 and 80%) were introduced; in FY 85 an entitlement rate of 100 percent was added to the entire set of three and in the following year, three rates (100, 70 and 40%) replaced the earlier set of four, which have been in effect to date.

C. Provisions for ensuring easy and subsidized access to export finance;

- provisions for importing back-to-back letters of credit (LC);
- provisions for internal procurement under inland back-to-back LC arrangements;
- provisions for import credit at special reduced interest rates;

export credit guaranteeing arrangements.

The flow of export finance in foreign exchange was eased in December, 1982 with the introduction of back-to-back LC facilities (without requiring permission of Bangladesh Bank) to ready made garments and specialized textile products. In FY 84 this facility was extended to other industries such as leather products.

To facilitate access of export finance for the local suppliers of fabrics to ready made garment units, the latter units were permitted since April FY 84, to open inland back-to-back LCs in favor of local manufactures and suppliers of fabrics. In April, FY 87 this facility was extended to other export industries in favor of their suppliers of local materials.

During FY 77 exporters were authorized to have access to working capital bank finance up to 80 percent of LC value at a concessionary interest rate of 11.5 percent against the normal rate of 13 percent. This special reduced rate was revised over the years and since FY 85 export credit is made available at a general concessionary rate of present except for fine industries - engineering and electronic goods, handicrafts, handloom products, toys and leather products. To these industries, export credit is available at a special 7 percent rate.

Starting in FY 89 a high level Export Credit Monitoring Committee administered by the Bangladesh Bank Governor is acting as a body to monitor the flow of export credit. The committee will also help remove any bottlenecks in the system.

In FY 78 Saharan Bima Corporation introduced an Export Credit Guarantee Scheme (EGGS). This scheme covers possible commercial and political risks by exporters. A comprehensive guarantee scheme (insurance) covers new exporters directly up to 95 percent. Since the mid-eighties, the coverage of this scheme in total non-traditional exports has gone up significantly, currently covering 28 percent of the value of non-traditional exports.

D. Provisions for a rebate on income tax and a duty concession on imported capital machinery.

Measures for a rebate for exporters were first introduced in FY 77. No rebate is provided if export sales do not exceed 10 percent of total sales of a unit and it is provided at a rate of 30 to 60 percent of income tax payable. The maximum rebate of 60 percent is available when export sales exceed 40 percent of the total sale. Since FY 87, income from exports of handicrafts has been completely exempted from income tax as a special case.

A concessionary duty of 2.5 percent with no sales tax was

introduced in FY 81 on imported machinery for export industries with a minimum of 70 percent export sales. Starting in FY 83 the same rate became applicable to industries located in least developed areas and also to small and cottage industries using more than 70 percent domestic resources. Permit fees on imported capital machinery were also listed for all industries in FY 83.

FINANCIAL SECTOR POLICY

POLICIES	GOALS	STRATEGIES
Financial sector reforms	Improvement in credit recovery	Recover overdue agricultural and industrial loans. As far as agricultural credit is concerned, only 40% of the repayments due were collected in FY 87 compared to 49% in FY 82.
		Establish targets for repayments by the largest 100 defaulters of loan from state owned banks.
		Expand credit passbook system for agricultural crop loans.
		Introduce large and administrative changes necessary to take action against loan defaulters. One of such measures is that a defaulter cannot run for any public office. (Bangladesh Gazette, June 1988)
	Strengthen financial institutions	Strengthen bank supervision and establish legal department in Bangladesh Bank. Extend supervision to non-bank financial intermediaries
		Improve loan classification system to identify nonperforming debts and provide adequate provision for debt. The Financial Sector Credit (FSC) Project of IDA has proposed that any loan that is more than 7 years overdue be classified as sub-standard and any loan that is more than 3 to 5 years overdue should be classified as doubtful or lost respectively. On the issue of provisions,

POLICIES	GOALS	STRATEGIES
		present regulations require banks to provide for 50% of the amount classified as doubtful and 100% for lost loans. Furthermore, banks are required to maintain a general provision of 2.5% of their total loan portfolio outstanding at the end of 1986 to be increased to 4% at the end of 1989. The FSC project proposes to provide for 20% of outstanding principal and existing capitalized interest on sub-standard loans. (World Bank: Bangladesh - A Program for Financial Sector Reform, December, 1987, pps.192 and 174).
		Raise the minimum requirement for paid-up capital and reserves for nationalized commercial banks. In FY 88 the statutory reserve ratio of commercial banks was increased from 5 to 10 percent and the liquidity reserve requirements of these banks was 25 percent.
		Increase bank autonomy by allowing private sector equity participation in nationalized banks.
Monetary Policy	Improve efficiency of monetary management	Enhance technical and legal aspects of monetary management including creation of a technical unit at Bangladesh Bank.
		Shift from direct credit controls towards indirect and more flexible monetary instruments.
		Flexible management of liquid assets and reserve requirements by Bangladesh Bank.

POLICIES	GOALS	STRATEGIES
		Introduce general rediscount window.
		Identify interest subsidies and shift burden of such subsidies from the state-owned banks to the government. At present there are 12 professional lending programs with 85% refinancing by Bangladesh Bank. The NCBs carry most of the interest rate subsidy costs of such programs, which amounted to an average negative net spread of 4% in FY 85 after provisions for bad debt.
	Stabilize inflation rate	Stabilize growth of money supply. Between FY 84 and FY 88 the target for annual growth rate of M2 was almost 17 percent, whereas the actual growth rate during the same period was 15 percent.
		Restrict credit expansion on a stable path. Credit expansion during the last 5 years was more or less stable at around 13 percent.
Interest rate	Liberalize the structure of interest rates	Make the present subsidy on interest rates visible.
		Move toward a more market-determined level and structure of interest rates. A more market-oriented interest rate has been proposed in FSC.
		Sectoral subsidy to encourage investment in selected sectors. The proposed FSC has argued for a 4% interest rate subsidy for agriculture and a 6% rate for small industry.
	Saving mobilization	Increase in deposit rate to make real rates positive to mobilize savings. At present, the average deposit rate on

fixed deposits is about 14 percent which is 2 percent lower than the general lending rate.

A more flexible and realistic lending rate to reflect the real cost of borrowing.

FISCAL POLICY -- PUBLIC RESOURCE MOBILIZATION

POLICIES	GOALS	STRATEGIES
Tax reforms	Rationalize tax system; move toward broad based, elastic tax structure; reduce distortive elements and mobilize domestic resources	Undertake study of efficiency of investment taxes. Introduce tax reforms after review of recommendations of the tax reform studies. Improve tax administration by reorganizing the National Board of Revenue in order to increase tax collection and reduce tax evasion. Explore areas where taxes can be imposed with less regressive effects and mobilize resources. One particular area would be agriculture in Bangladesh, development tax (LDT) is only 1.5% of total tax revenue. Taking into account that probably no more than 60% of LDT revenues come from agricultural land, it is estimated that the direct tax burden on agriculture is on average less than 0.5% of the amount of land income. The agricultural sector therefore remains highly undertaxed. Increase tax income so that tax/GDP ratio becomes 9%.
Fees and charges	Improve cost recovery in transport, communication, health and education sectors	Adjust prices of railways, domestic, airfares, roadtolls, telephone, telex, and postage. For example, the tariff on railway, domestic airfare, telex, telephone and postage have been increased during the past 2 budgets as well as the present one.

POLICIES	GOALS	STRATEGIES
		Improve cost recovery of services provided by local governments.
Public sector enterprises	Strengthening operating efficiency and profitability	Pursue flexible pricing policies. Since FY 88 only 4% of the monopoly and sensitive items have been formally selected for price controls. These are fertilizer, sugar, paper and newsprint. The others can freely set prices for their products.
		Extension of performance evaluation system
		Reduction in unproductive expenditures
Energy sector reforms	Eliminate distortions in relative prices of competing fuels	Reform tariff structure and adjust prices of gas and power. Over the years, since FY 88 the tariff on the value of gas for commercial use has gone up from Tk. 95/MCF to Tk. 327/MCF and the tariff on electricity for commercial use has increased from Tk 2.50/KWH to Tk. 5.40/KWH.
	Improve efficiency of public sector corporations	Reduce system losses and overdue accounts of the Bangladesh Power Development Board. The present system loss in power in Bangladesh is 37% which is 22% more than technically recommended.

PUBLIC EXPENDITURE POLICIES

POLICIES	GOALS	STRATEGIES
Composition of expenditure	Improve efficiency in expenditure	Follow a more rational expenditure pattern
		Cut down unproductive expenditures. Estimates are that unproductive expenditures amount to 45 percent of total current expenditures.
		Minimize unplanned revenue expenditures.
Planning and implementation	Improve budget execution and review	Ensure adequate allocation of funds for operation and maintenance.
		Improve accounting and fiscal reporting
		Strengthen monitoring procedures for inter-governmental transactions.
	Improve project implementation	Streamline procedures for project preparation and implementation.
	Provide employment to the increasing labor force both in the urban and the rural sectors	Generation of rural employment in the crop sector through intensive cultivation. Between FY 85 and FY 88 employment in the agricultural sector increased from 11.64 million man-years to 12.80 million man-years.
		Creating employment opportunities in the non farm sector. In FY 85 about 1 million people were employed in the non-farm sector.
		Employment generation through public works

POLICIES	GOALS	STRATEGIES
		programs. Since FY 85 the Food for Works program has created 908 million man days of work for the rural unemployed.
		Employment through NGO intervention.
		Creation of Employment opportunities in the urban informal sector.
		Emphasize on the self employment program with facilities for credit and marketing.
		Technical education and training for skill formation.
		Opportunities explored for overseas employment.

APPENDIX D

The Third Five-Year Plan: Targets and Performance

APPENDIX D
The Third Five-Year Plan of Bangladesh: Targets and Performance

I. OBJECTIVES

The Third Five-Year Plan (TFYP) was formulated by the Bangladesh Planning Commission for the period Fiscal Year 1985 through Fiscal Year 1990. The stated objectives of the plan centered around the key strategic theme of poverty alleviation:

(1) Expansion of productive employment;
(2) Reduction of population growth;
(3) Universal primary education and human resource development;
(4) Development of technological base for bringing about structural change; and
(5) Food self-sufficiency.

II. Goals and Strategies

A. Agriculture and Rural Development

Productive employment was viewed in the TFYP as an instrument of poverty alleviation "because it would make employment and income generation inseparable and give the laboring populace such command over resources and purchasing power as it is necessary for satisfaction of their basic needs." The plan envisaged the creation of productive employment through (i) diffusion of modern technology in agriculture and (ii) upgrading and promoting cottage industries into a dynamic rural industries sector.

In FY 85, only 25 percent of net cropped land area was covered by modern technology and this share was expected to reach 40 percent during the course of the TFYP period. Actual performance registered between FY 85 and FY 88 showed increases in land acreage under HYV rice and wheat from 9.44 million acres to 9.51 million acres -- an increase of only 1 percent. During the same period, the total off-take of chemical fertilizers marginally increased from 1.260 million tons to 1.513 million tons, an increase of only 2 percent. With respect to ground water and surface water irrigation, the target plan was to bring 3.52 million acres of additional land under irrigation, the bench mark level in FY 85 being 6.12 million acres. During the first three years of the plan, only 1.58 million acres could be brought under irrigation, which represents only 45 percent of the target. Thus the spread of modern technology in agriculture was quite limited during the first three years of the plan period, as a result of which the rate of growth of agricultural employment was also only marginal. By FY 88, agricultural employment increased only to 12.80 million man years from the benchmark (FY 85) level of 11.64 million man years, representing a 9.4 percent increase over three years.

Although no estimates of cottage industry employment creation are available for the period FY 85-FY 88, estimated additions to employment in the total industrial sector during the same period amount to only 0.27 million man-years. Overall, while the target for new employment creation during the TFYP period was 5.1 million man years, between FY 85 and FY 88, only 2.2 million man-years of additional employment were created, which represents 43 percent of the target set for the five-year period.

B. Population

Population size and growth have direct bearing on employment needs as well as opportunities. While population size and growth determine the employment demand, they also affect the capability of the economy to create employment opportunities. Because of this particular impact, the plan recognizes employment creation and population control as the prime movers of the economy out of the current poverty syndrome. The stated objective of population growth from the FY 85 level of 2.4 percent per annum to 1.8 percent by FY 90, which implies reduction of the Crude Birth Rate (CBR) from 39 per 1000 in FY 85 to 31 per 1000 in FY 90 and that of Crude Death Rate (CDR) from 15 per 1000 to 13.4 per 1000 during the same period.

Between FY 85 and FY 88, the CBR declined from 39 to 36 as against the target of 31 and the CDR was reduced from 15 to 14 as against the targeted 13.4. As a result, population growth rate in Bangladesh as estimated in FY 88, was about 2.2 percent. To achieve a growth rate of 1.8 percent in FY 90, it would be necessary to have a reduction in the CBR of 5 per 1000 within the next year, a clearly unlikely outcome, given recent trends.

C. Education

Since productive employment is closely linked to education and skill formation, the plan attached great importance to the development of education. It maintained that manpower development will be the necessary condition for attaining the goal of poverty alleviation. The plan proposed to increase the rates of expenditure on education; to overcome existing imbalances between education and labor markets, a manpower plan was proposed as an adjunct to the Third Plan.

Total expenditure allocated to education in the TFYP, covering the period FY 85-FY 90, amounted to 12200 million Taka, at FY 85 prices. Benchmark and actual expenditure levels are shown in the following Table:

Table 1
Development Expenditures in Education
Million Taka at FY 85 Prices

FY 85 (Benchmark)	FY 86 (Actual)	FY 87 (Actual)	FY 88 (Actual)	FY 85-88 (Actual)	TFYP Allocation
1252.0	1231.3	1748.2	1777.8	4757.3	12200.0

It can be seen that during the first year of the TFYP actual development expenditure on education was lower than in the benchmark year. During the second year of the TFYP, this expenditure rose by 41 percent, but during the third year it increased by only 1.6 percent. Thus development expenditures on education are not increasing at a higher rate. Furthermore, when a cumulative account is taken, it is found that during FY 85-88, only 39 percent of total TFYP development allocation for education has been actually spent. Secondly, to date, no manpower plan has been formulated as an adjunct to the Third Plan.

D. Basic Needs

The major targets for basic needs in the TFYP, the benchmark level in FY 85 and the registered outcomes for the period FY 85-FY 89 are presented in the following Table.

Table 2
Basic Needs: Targets and Outcome

Items	Benchmark level (FY 85)	TFYP target at the end of the terminal year (FY 90)	Outcome at the end of FY 88
Foodgrains (Mill. Tons)	16.0	20.7	16.5
Fish (Mill. Tons)	0.77	1.07	0.87
Pulses (Mill. Tons)	0.21	0.30	0.29
Cloth (Mill. Tons)	77.2	121.5	61.5
Primary School Enrollment (Millions)	89.2	116.2	112.0
Hospital beds (000's)	27.6	40.7	33.0
Rural drinking water (Mill. Tubewells)	0.67	0.89	0.78
Electrified villages (000's)	10.0	22.0	—

E. Sectoral Growth

In the TFYP, economic growth was identified as a pre-condition for productive employment, meeting of basic needs and ultimately for poverty alleviation. The sectoral growth rate targets during TFYP and the respective achievements at the end of FY 88 are presented in the following Table.

Table 3
Sectoral Growth Rates--Targets and Performance

Sectors	FY 85 Sectoral Share (in %)	TFYP target Annual growth rate (in %)	Sectoral Share at the end of FY 90 (in %)	Annual growth rate FY 85-FY 88 (in %)	Sectoral Share (in%)
Agriculture	50.4	4.0	46.9	2.6	48.7
Industries	9.5	10.1	11.9	4.8	9.8
Gas & Electricity	0.7	9.6	0.9	13.3	1.0
Construction	2.3	4.9	2.3	8.3	2.6
Transp. & Comm.	5.2	6.9	5.6	5.7	5.5
Trade & other Services	22.4	6.4	23.3	4.2	22.5
Housing Services	3.0	3.7	2.8	4.0	3.0
Public Services	6.5	4.6	6.3	5.6	6.9
Total	100	5.4	100	3.8	100

F. Food-Self-Sufficiency

Food self-sufficiency was a major stated objective of the TFYP. To ensure a consumption of 16 oz. a day per capita and a security reserve of 1.5 million tons at the end of FY 90, the foodgrain production target was set at 20.7 million tons. This target implied an average output increase of 5.1 percent annually throughout the plan period.

As against all these targets, at the end of FY 88, foodgrain production reached 16.5 million tons. It implies an average annual growth rate of 1 percent during FY 86-FY 88 relative to the planned growth rate target of 5.1 per annum.

G. Self-Reliance

On the issue of self-reliance, the plan had two major objectives -- (i) change in the intermural character of aid in favor of commodity aid and (ii) to step up efforts for domestic resource mobilization to provide matching funds. The plan assumed that net external resource inflow would amount to Tk. 210.28 billion and estimated the level of domestic resources to be Tk. 175.72 billion at FY 85 prices, giving a total size of Tk. 386.00 billion.

As far as the first objective is concerned, two observations can be made. Firstly, between FY 85-FY 88, commodity aid increased by 18 percent, project aid increased by 40 percent and, secondly, during that same period, the share of commodity and in total foreign aid declined by 3 percent from 34 percent to 31 percent, but that of project aid increased by the same amount from 47 percent to 50 percent. Both these observations imply that the economy is not moving towards satisfying the first objective mentioned above. With regard to the second objective, net foreign aid disbursements during the first 3 years of the plan period have already reached Tk. 454.0 billion as against target of Tk. 210.28 billion for the whole plan period. Within the target of Tk. 210.28 billion for the whole plan period. Within the domestic resource target of Tk. 175.72 billion, the share of public financing was estimated to be Tk. 59.60 billion. The actual level of public financing during the period FY 85-FY 88 was Tk. 18.94 billion, implying only a 23 percent achievement of the target.

III. PLAN SIZE AND ALLOCATION

The overall plan allocation of Tk. 386 billion was assumed to be composed of Tk. 250 billion in public sector investments and Tk. 136 billion in private sector investments. With respect to private investment expenditures, the plan recognized that stated targets were largely indicative: actual expenditures would depend on the investment climate, macroeconomic policies, conditions in the domestic and external economic environment and on the entrepreneurship of the private sector.

Contrasted with a target level of Tk. 250 billion for public investment expenditure during the five year plan period, actual investments during FY 85-FY 88 amounted to Tk. 108.7 billion representing 43.5 percent of the target. As against the plan target of Tk. 136 billion for private investment, only Tk. 58.2 billion has been achieved during FY 85-FY 88, or 42.8 percent of the planned target -- under existing circumstances it appears highly improbable that it would be possible to achieve the remaining 57.2 percent of the private investment target within the two years resting in the plan period.

The sectoral allocation of planned investments and the actual expenditures during the period FY 85-FY 88 are presented in the following Table.

Table 4
Sectoral Investment Expenditures--Planned and Actual
(Billion Taka at FY 85 Prices)
Public Sector

Sectors	TFYP Target	FY 85-FY 88 Actual	TFYP Target	FY 85-FY 88 Actual
Agriculture, Water Resources & Rural Development	70.000	20.300	45.000	13.800
Industry	26.000	14.900	32.000	7.000
Energy	56.000	27.300	5.000	
Transport and Communications	27.500	11.800	15.000	13.800
Physical Planning and Housing	5.500	3.700	36.500	11.000
Education	11.300	4.800	.500	—
Health & Population	14.200	4.900	1.200	
Trade & other Svcs.	5.300	1.600	0.800	12.600
Others	34.200	19.400		
Total	250.000	108.700	136.000	58.200

IV. SECTORAL PRODUCTION TARGETS

The TFYP production targets of major items of different sectors and the relevant achievements at the end of FY 88 are presented in the following Table:

Table 5
TFYP Production Targets

Sectors and items	Benchmark Year (FY 85)	TFYP targets at end of FY 90	Actual at the end of FY 88
AGRICULTURE			
1. Foodgrains (mil. tons)	16.000	207.000	16.500
(a) Rice (mil. tons)	14.500	18.000	15.400
(b) Wheat (mil. tons)	1.500	2.600	1.100
(c) Others (mil. tons)	0.030	0.100	0.040
2. Jute (mil. tons)	4.600	6.000	4.700
3. Tea (mil. Kg)	38.200	40.300	52.800
4. Sugarcane (mil. tons)	7.000	8.200	7.600
5. Pulses (mil. tons)	0.210	0.300	0.296

6. Oilseeds (mil. tons)	0.290	0.350	0.300
7. Potato (mil. tons)	1.300	1.700	1.200
8. Fish (mil. tons)	0.770	1.070	0.870
INDUSTRIES			
1. Jute textile (mil.tons)	0.560	0.650	0.580
2. Cotton textile			
(a) yarn (mil.kg.)	61.800	95.000	59.000
(b) Cloth (mil.mtr.)	77.200	121.500	61.500
3. Fertilizer (mil.tons)	0.810	2.200	1.400
4. Paper and Newsprint (mil.)	0.090	0.100	0.092
5. Sugar (mil.tons)	0.088	0.300	0.180
6. Cement (mil.tons)	0.240	0.850	0.310
7. Steel (mil.tons)	0.101	0.230	0.070
ENERGY			
i. Electricity			
(a) Generation (GWH)	4536.000	8707.000	6540.000
(b) Sales (GWH)	2813.000	6121.000	3773.000
2. Gas			
(a) Output (MMCFD)	450.000	657.000	700.000
(b) Connection (ml)	0.240	0.348	0.400
(c) Development wells	21.000	27.000	38.000
TRANSPORT AND COMMUNICATIONS			
1. Paved roads (in km.)	4949.000	7723.000	5206.000
PUBLIC HEALTH			
1. Rural water supply (mil.tubewells)	0.670	0.890	0.780
EDUCATION			
1. Primary School (ml.)	44.200	45.100	
2. Primary enrollment (ml.)	89.200	116.200	112.00
3. Secondary education enrollment (ml.)	24.800	27.500	28.600
4. College education enrollment (ml.)	4.300	4.400	7.800
5. University education enrollment (ml.)	0.038	0.042	0.043
6. Technical education enrollment (ml.)	0.019	0.022	0.020
HEALTH			
1. Hospital beds (ml.)	0.028	0.041	0.033
2. Doctors (ml.)	0.016	0.023	0.019
3. Nurses (ml.)	0.006	0.010	0.008

V. SECTORAL ISSUES AND STRATEGIES

A. Development of Minor Crops

In order to encourage the development of minor crops, the TFYP advocated two strategies -- first, shifting from monocropping to multiple cropping and second, instituting an integrated agricultural price policy with relative price incentives for minor crops.

Regarding the first strategy, there has been a shift from monocropping to multiple cropping, but Boro rice and wheat have taken the place of minor crops. For example, between FY 85 and FY 88, the production of the two major rice crops -- Aus and Aman -- remained static at 10.7 million metric tons whereas that of Boro increased from 3.9 to 4.7 million metric tons. Production of minor crops increased by only 0.1 million metric tons during the same period. General trends in relative prices continue to favor major crops.

B. Livestock Development

Features of the livestock sector in [illegible]esh include shortages of draught power as well as mild supply. In the TFYP it was recogn[illegible]at these two problems needed to be addressed separately for the use of cows for both purposes [illegible]ld not lead to an optimal outcome. Average national draught energy requirements were esti[illegible]ed at 0.373 kw/ha, while actual available draught power was estimated at 0.271 kw/ha, showing [illegible] deficit of 0.102 kw/ha. On the other hand, during the first three years of TFYP, milk productio[illegible] has increased only by 1.2 percent per annum.

C. Jute sector policy

Historically, jute output in Bangladesh suffered from the jute-rice relative price disadvantage and absence of stability either in jute price or output. The plan maintained that it would address both these problems by (a) improving the quality of jute seeds in order to reach higher yields so as to make it cost-effective in relation to rice and (b) stabilizing the jute market through a stable price policy.

Actual performance registered between FY 84 and FY 88, shows that whereas the average yield of rice increased by 12 percent, that of jute increased by 2 percent only. Furthermore, in the recent past, government interventions in the jute market have been so weak that the severe problems concerning price and supply instability remain undiminished.

D. Cotton Textile Policy

The primary objectives of the TFYP with regard to the textile sector were stated to be: (a) diversification of export items because of prevailing quota restrictions on various items on the part of importing countries and (b) local fabric manufacture to increase the value added in the output of the garments industry. The plan aimed at increasing both spindlage and yarn output by 50 percent.

The diversification policy seems not to have gotten the right kind of direction -- for example, from apparel it should be possible to move to knitwears as the demand for them is on the increase in importing industrialized countries. On the second issue, between FY 85 and FY 88, the number of spindles working in the cotton textile industry has actually declined from 922 thousand to 884 thousand and similarly total production of yarns has gone down from 106.2 million lbs. to 102.9 million lbs., in sharp contrast to the planned targets.

E. Exports, Imports and Balance of Payments

The TFYP declared that an important step towards self-reliance would be to promote an outward-looking industrialization policy in order to overcome balance of payments constraints. Elsewhere in the plan document, however, it is stated that though economic policies will vigorously seek new openings for exports and will pursue a reorientation of industrial production towards export markets, no substantial gain was envisaged over the Third Plan period in the present international trade outlook. The export targets of TFYP and the achieved results are presented in the following Table.

Table 6
Exports--Targets and Performance

Items	Benchmark year (FY85)	TFYP Targets at end of FY 90	Actual at end of FY 88
Jute (raw)	3.900	4.010	3.690
Jute goods	10.400	11.430	8.220
Tea	1.560	1.920	1.290
Leather	1.780	3.250	4.580
Garments	3.000	5.010	14.840
Others	3.780	4.980	7.080
Total	24.420	30.600	39.700

Regarding imports, the TFYP maintained that "during the Third Plan, the import structure will undergo significant changes. Food imports will decline due to expansion of domestic output and imports of other consumer goods will increase at a reduced rate due to increased substitution by domestic output; while intermediate goods imports will grow faster to ensure a significant improvement in capacity utilization of local industries. Capital goods imports will increase at the rate of 3.5 percent a year." Actual performance as contrasted to planned targets is presented in tabular form below.

Table 7
Imports--Targets and Performance

Items	Benchmark year (FY 85)	TFYP targets at end of FY 90	Outcome at the end of FY 88
Foodgrain	13.180	6.790	15.770
Oil and oilseeds	2.910	3.150	4.420
Other consumer goods	6.230	7.930	16.750
Intermediate	32.120	44.000	34.600
Capital goods	15.910	18.890	24.960
Total	70.350	80.760	96.500

It can be seen from the Table that, in contrast to the stated objectives of the TFYP, between FY 85 and FY 88 food and other consumer goods imports have increased significantly, intermediate goods imports have increased marginally and capital substitution has not taken place as expected though some marginal improvements in capacity utilization might have taken place.

The following Table contrasts planned and realized values of the key components of the Balance of Payments for Bangladesh for FY 85-FY 88 at FY 85 prices:

Table 8
Balance of Payments--Targets and Actual
Total for Three Years (FY 85 - FY 88)

Categories	Plan Target	Actual Estimated	% Achievement
1. Import Payments	-9841	-9757	99.10
(a) Goods (c.i.f.)	-8555	-8451	98.80
(b) Services	-1286	-1306	101.60
2. Export Receipts	4098	4742	115.70
(a) Goods (c.i.f.)	3048	3817	123.80
(b) Services	1014	925	91.20
3. Balances of goods & services	-5743	-5015	87.30
4. Remittances	1291	2072	160.50
Current Account Balance	-4452	-2943	66.10
5. MLT Debt Repayments	-376	-448	119.10
Balances of Payments gap	-4828	-3391	70.20
6. Aid inflow	4205	4570	108.70

This table shows that during the first 3 years of the TFYP, even if export receipts have exceeded the plan target and import payments were contained within the plan target, the reliance on external help has increased. Self-reliance remains as remote a goal as ever.

VI. CONCLUSION

While the impact of the severe floods of 1987 and 1988 cannot be neglected, the shortfalls of realized economic performance relative to plan targets reenforce the notion that the Five-Year Plans remain very much a document of politically desirable goals and a paper exercise on sector allocations, largely divorced from ultimate policy decision-making and implementation. This feature of the planning apparatus explains deviations of actual vs. planned outcomes more readily than any concrete analysis of individual performance.

APPENDIX E

Estimation of Capital Stock: The CICOR Approach

APPENDIX E
Estimation of Capital Stock: The CICOR Approach

In LDCs, statistics on time-series data for sectoral or national capital stock are typically unavailable. Time-series for sectoral capital stock are useful because they allow precise estimates of sectoral capital productivity and sectoral potential output. Several methods have been proposed to estimate fixed capital stock series in the absence of reliable economic survey sample data on the value of fixed assets, i.e., machinery, equipment and physical plant. These indirect methods are usually of an ad hoc nature. Even when data from surveys of reported values on balance sheets are available and direct methods of estimation can be employed, the resulting estimates of capital stock tend to be seriously undervalued. In estimating capital stock time series for Bangladesh, we have employed a new methodology denoted the Cumulative Incremental Capital-Output Ratio (CICOR) approach. This indirect method requires generally available time series data on sectoral net investment and sectoral real output. Furthermore, it affords the possibility of estimating upper bounds on the magnitude of the error in the capital stock estimates. In addition, the magnitude of the error can be shown to decrease as the sample size increases. Because of these properties, the CICOR method can be regarded as generally superior even to direct methods based on survey data. The steps involved in the estimation of capital stock series employing the CICOR approach are described below.

1. The point of departure is the construction of time series for sectoral real output Y(t) and sectoral real net investment NI(t), throughout the sample period [0,T]. Net sectoral investment can be derived from gross sectoral investment series and estimated capital consumption allowances. If sectoral estimates for capital consumption allowances are unavailable, initial guesses should be chosen which are consistent with national estimates of capital consumption--two or three iterations are usually sufficient to arrive at fairly dependable estimates of sectoral capital consumption.

2. A time series for Z(t) is constructed for each time-period t in the sample period as follows:

$$Z(t) = CNI(t)/CY(t)$$

Where

$$CNI(t) = SUM[n;0,t-1]\ NI(n)$$

and

$$CY(t) = Y(t) - Y(0)$$

The ratio Z(t) is designated the Cumulative Incremental Capital-Output Ratio (CICOR).

3. The behavior of Z(t) is tracked until it reaches an approximate steady-state. The steady-state value of Z(T) is an estimator of the true capital-output ratio KY(T).

4. An estimate for the capital stock at time T, KS(T), is constructed by means of the relation

$$KS(T) = Z(T)*Y(T)$$

5. Estimates of K(t) for the remaining time-periods throughout the sample period [0,T-1] are constructed taking K(T) as a starting point and employing the net investment time series in the relation

$$KS(t-1) = KS(t) - NI(t)$$

The evolution of Z(t), the CICOR ratio, as compared with the conventional ICOR ratio--computed with a three-year lag--is portrayed in figures E.1 through E.4. It can be seen that, whereas the behavior of the ICOR is highly volatile throughout the sample period, the CICOR reaches a stationary value during the last five years.

Figure E.1

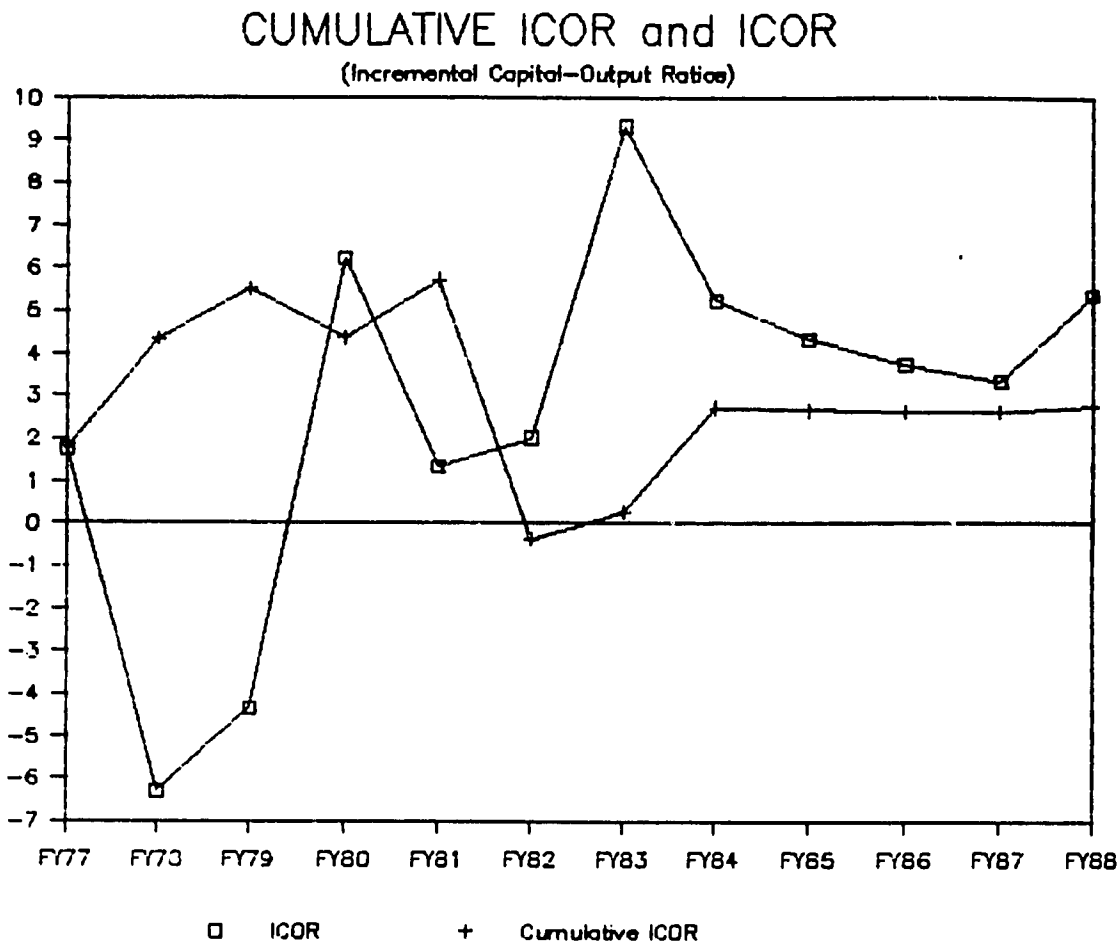

CUMULATIVE ICOR and ICOR
(Incremental Capital–Output Ratios)
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-6
-7
FY77
FY78
FY79
FY80
FY81
FY82
FY83
FY84
FY85
FY86
FY87
FY88
ICOR
Cumulative ICOR

Figure E.2

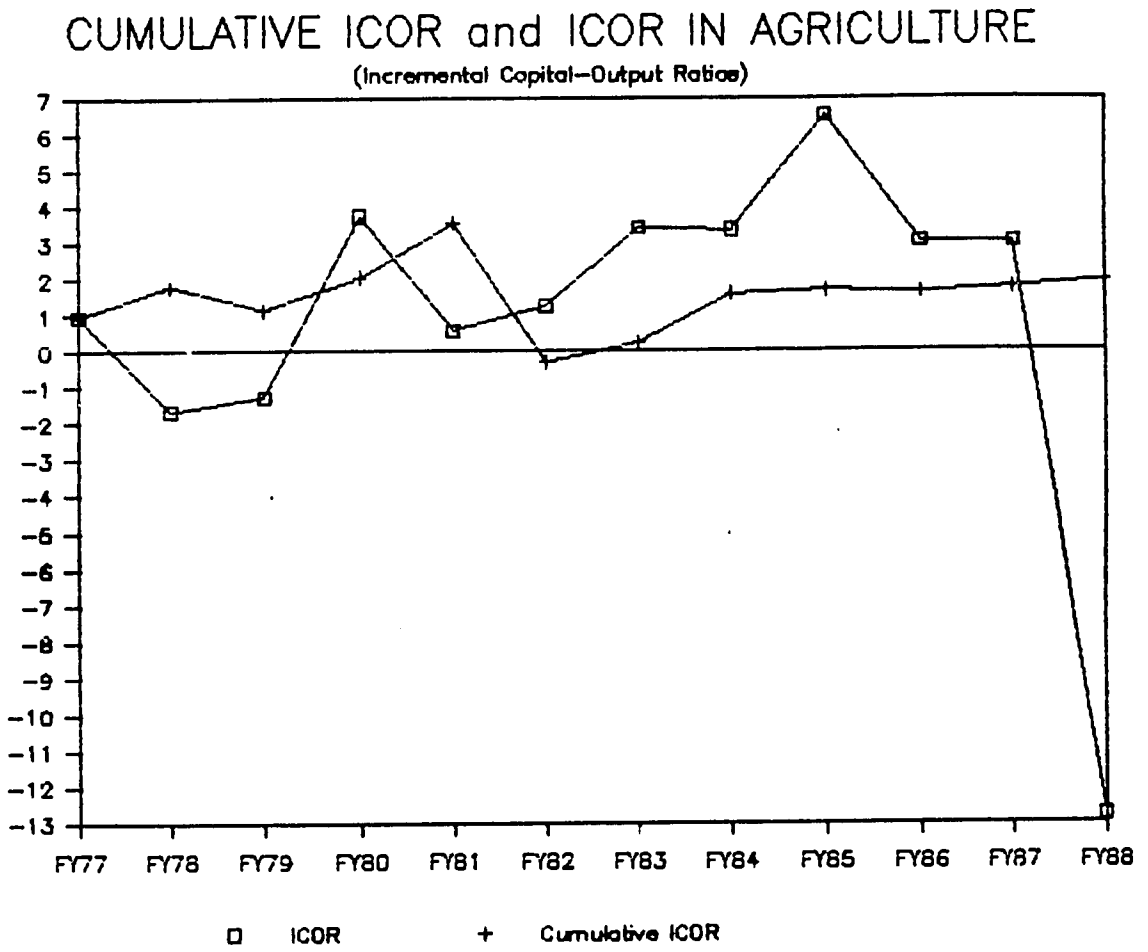
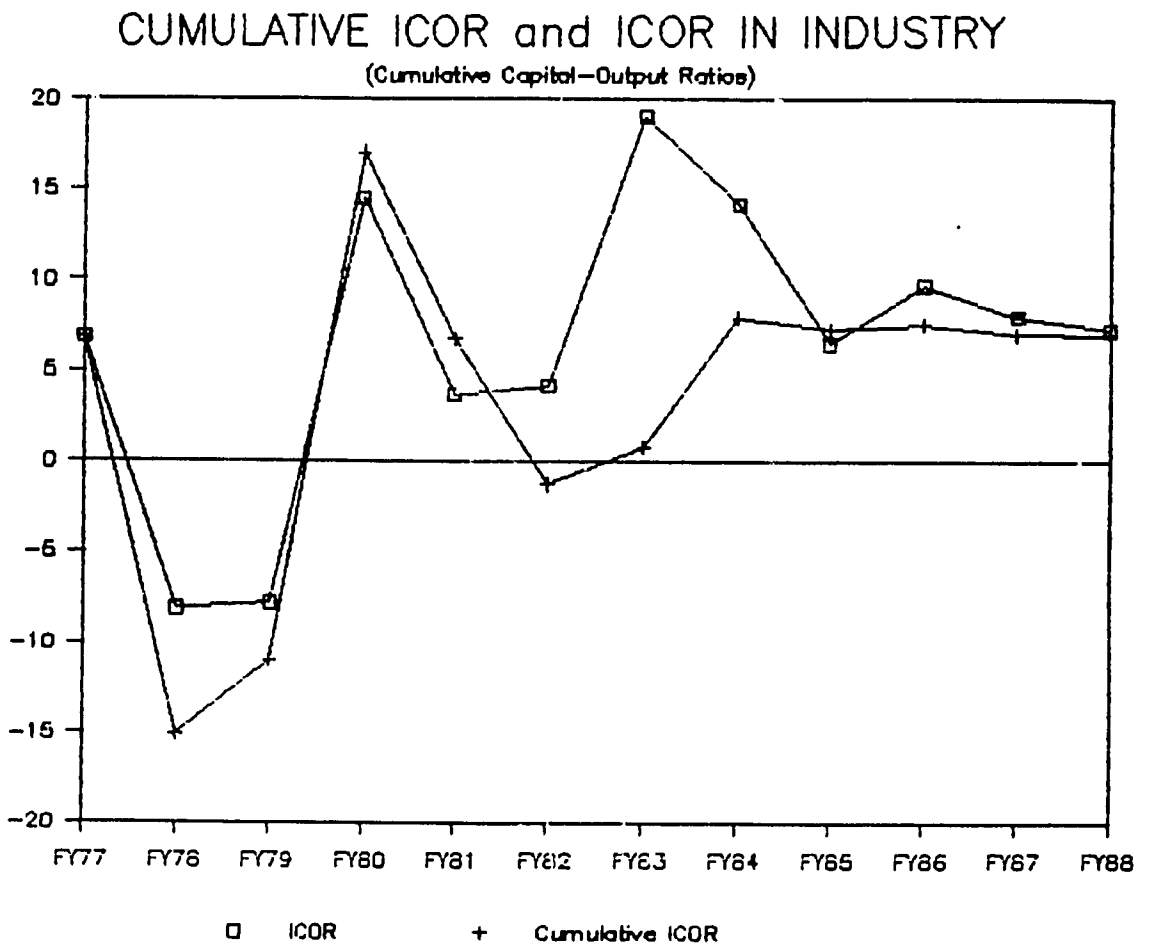

CUMULATIVE ICOR and ICOR IN AGRICULTURE
(Incremental Capital-Output Ratios)
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
FY77
FY78
FY79
FY80
FY81
FY82
FY83
FY84
FY85
FY86
FY87
FY88
ICOR
Cumulative ICOR

Figure E.3



184