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Poverty in Bangladesh: Building on Progress

December, 2002

Poverty Reduction and Economic Management Sector Unit
South Asia Region, World Bank



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ACRONYMS AND ABBREVIATIONS

ADP	Annual Development Program	IMF	International Monetary Fund
ABC	Assessment of Basic Competency	IMR	Infant Mortality Rate
BANBEIS	Bangladesh Bureau of Educational Information and Statistics	I-PRSP	Interim Poverty Reduction Strategy Paper
BBS	Bangladesh Bureau of Statistics	LFS	Labor Force Survey
BDHS	Bangladesh Demographic and Health Survey	LGED	Local Government Engineering Department
BHDR	Bangladesh Human Development Report	MDG	Millennium Development Goals
BIA	Benefit Incidence Analysis	MFI	Micro Finance Institutions
BINP	Bangladesh Integrated Nutrition program	MMR	Maternal Mortality Rate
BRAC	Bangladesh Rural Advancement Committee	MWCA	Ministry of Women's and Children's Affairs
CBN	Cost of Basic Needs	M&E	Monitoring and Evaluation
CDF	Credit Development Forum	NA	National Accounts
CMR	Child Mortality Rate	NCB	National Commercial Bank
CNS	Child Nutrition Survey	NEC	National Economic Council
CPD	Center for Policy Dialogue	NGOs	Non-Governmental Organizations
DHS	Demographic and Health Services	NIPORT	National Institute of Population research and training
ESP	Essential Services Package	PA	Poverty Assessment
ERD	External Relations Department	PAC	Public Affairs Center
FFE	Food For Education	PARC	Public Administration Reform Commission
FFW	Food For Work	PCE	Per Capita Expenditures
FMRSP-	Food Management and Research Support	PER	Public Expenditure Review
IFPRI	Project -International Food Policy Research Institute	PETS	Public Expenditure Tracking Survey
FSS	Female Secondary Stipend	PFDS	Public Food Distribution System
GDP	Gross Domestic Product	PKSF	Palli Karma Sahayak Foundation
GIE	Gini Income Elasticity	PMED	Primary and Mass Education Division
GOB	Government of Bangladesh	PPRC	Power and Participation Research Center
GR	Gratuitous Relief	RD	Rural Development
HES	Household Expenditure Survey	REB	Rural Electrification Board
HIES	Household Income and Expenditure Survey	RMP	Rural Maintenance Program
HKI	Helen Keller International	RNF	Rural Non-Farm
HSC	Higher Secondary Certificate	SMC	School Management Committee
IFPRI	International Food Policy Research Institute	SOE	State-Owned Enterprise
IGVGD	Income Generation Vulnerable Group Development	SSC	Secondary School Certificate
IMED	Implementation Monitoring and Evaluation Division	TNO	Thana Nirbahi Officer
		TR	Test Relief
		UDC	Union Disaster Committee
		UNDP	United Nations Development Program
		UP	Union Parishad
		UPVGD	Union Parishad Vulnerable Group Development
		VGD	Vulnerable Group Development
		VGF	Vulnerable Group Feeding
		WFP	World Food Program
		WHO	World Health Organization

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PREFACE AND ACKNOWLEDGEMENTS

This Poverty Assessment (PA), prepared simultaneously with a companion paper, the Public Expenditure Review, has been carried out jointly by the Asian Development Bank and the World Bank, with full participation of the Government of Bangladesh. While preparation of this PA started in the Fall 2001, the report is part of a long-term capacity-building effort initiated in late 1994. The World Bank and Asian Development Bank have worked with staff at the Bangladesh Bureau of Statistics (BBS) to help expand and enhance the information base on poverty. Extensive technical assistance and grant funding has been provided to help strengthen the National Accounts system as well as to enhance BBS's Household Expenditure Survey (HES) series. The HIES, labor force, and child nutrition surveys have provided the primary database for much of the analysis presented in this report. The findings of a number of background papers – on which this report draws heavily – have been discussed at a workshop in Dhaka in November 2001 attended by GOB staff, members of the I-PRSP preparation team, and academics and researchers. In addition, two seminars have been scheduled in May and June 2002 in Dhaka and Washington respectively to share the main findings of this report with the extended country teams working on Bangladesh with the view to improving the effectiveness of Bank operations. A conference in Dhaka is planned with a wide range of stakeholders in the fall of 2002 to discuss and disseminate the main findings of this report.

This report has been prepared by Salman Zaidi and Rinku Murgai, Economists in the Poverty Reduction and Economic Management (PREM) unit of the World Bank's South Asia Region, under the guidance of Kapil Kapoor, Lead Economist, and Sadiq Ahmed, Sector Director and Chief Economist. The team from the Asian Development Bank comprised Zahid Hossain, Rezaul Khan, and Omkar Shrestha. The report draws on contributions from Martin Cumpa (sources of income), Elena Glinskaya (benefit-incidence analysis), Wahida Huq (decentralization), Zahid Hussain (Education), Hanan Jacoby (determinants of wages), Quentin Wodon and Corinne Siaens (poverty projections, determinants of poverty), and, as well as on background papers prepared by Anil Deolalikar (nutrition) and Claire Salmon (labor).

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Executive Summary

Introduction

As with a glass that is simultaneously half full and half empty, Bangladesh has made significant, recent progress in reducing poverty but still faces the reality that roughly half its citizens, some 63 million people, live in deprivation. Of the poor, two out of three are caught in hard-core or extreme poverty, as measured by their consumption of food and other basic needs. This report examines the heartening record of advances during the 1990s, major challenges still to be overcome and priority measures to accelerate poverty reduction. Using very recent data for the most part, it presents an up-to-date portrait of poverty and of Bangladesh's resolute but sometimes deficient efforts to overcome it.

The successes have been measurable. They have also, though, been partial. The report suggests ways to build on what has been achieved and, through changes in emphasis, in practices and in policies, to realize healthy economic growth designed to benefit the rural poor as well as more rapid, sustained movement toward greater social justice. Dramatically lowering the incidence of poverty requires significantly higher levels of economic performance, but it also requires that growth reaches the poor and expands their opportunities. They, in turn, must have the assets – literacy, sound health, access to credit, among others – to capitalize on expanding options. Further, like all citizens and like entrepreneurs in particular, the poor need to have confidence in the integrity and efficiency of the country's political and administrative institutions – in the honesty of the police, for instance, and the accountability of officials at all levels. Such confidence is now conspicuous by its absence.

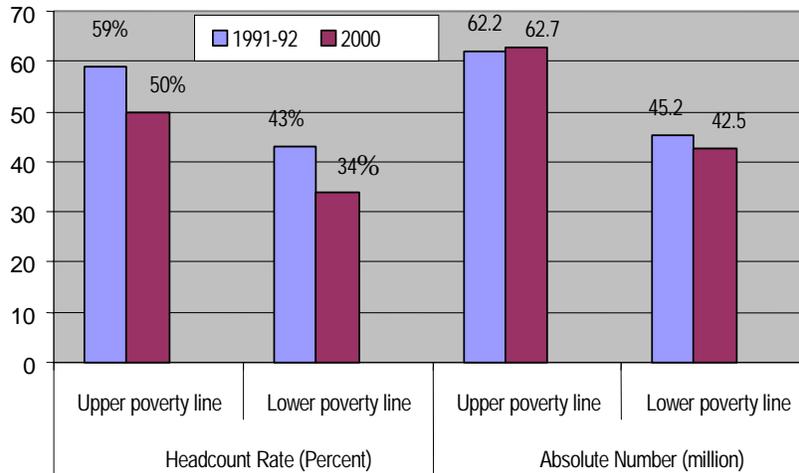
Bangladesh is in the midst of preparing the Interim Poverty Reduction Strategy Paper (I-PRSP) that will guide its efforts in the years ahead. At its core are commitments to expand the scope of growth that favors the poor and to improve the quality and reach of basic social services as well as the efficacy of safety-net programs to activate in times of trouble. On the political side of the development equation, the evolving strategy also looks to a future in which citizens generally secure greater opportunities to take constructive part in public affairs and the poor gain a more decisive voice in the decisions that shape their lives and prospects.

Translating this ambitious strategy into concrete and effective actions is no small challenge. Implementing it consistently and promptly will require determination and imagination not only inside Bangladesh but also from supporters and well-wishers abroad. As a contribution to that collective effort, this analysis brings together new data on poverty and, drawn from those findings, fresh perspectives on resource and reform policies to include in the mix.

Progress ... But

Reducing Poverty Almost every one of Bangladesh's impressive accomplishments in bettering the life of the poor during the last decade of the 20th century has to be qualified by recognizing the size and scope of the work that remains to be done. Thus, for example, poverty in Bangladesh shrank from 1991-92 to 2000 by a creditable 9 percent, with the decline occurring in both urban and rural areas and touching all of the poor, even the poorest of the poor. But because of population growth, Bangladesh entered the new millennium with the same absolute number of poor among its people as ten years earlier. One change – a drop of 2.7 million in the count of hard-core poor to 42.5 million in 2000 – undoubtedly stemmed in part from relatively broad-based growth in rural areas. However, 80 percent of the country's population and 85 percent of the poor continue to live in the countryside.

Declining poverty rates but little change in number of poor



Vulnerability Government safety net programs have worked to shield the neediest from destitution and from the consequences of the natural disasters to which Bangladesh is particularly prone. The record shows impressive progress on both counts. Various food distribution programs, for instance, not only appear to reach the clients they should serve but also to underwrite a number of needed public works and to stimulate the education of children from poor families. The massive flooding of 1998 tested disaster relief readiness and found it by and large up to the challenge, especially in delivering record amounts of staple foodgrains to inundated communities and households and – partly because of liberalization of imports – in keeping the price of rice relatively stable. The basic performance, including targeting, of the safety net seems adequate, if we ignore that the cost is wildly inflated by leakage – a euphemism for theft – that diverts fully 75 percent of the volume of commodities involved in the Food for Education program before they reach *any* intended beneficiary.

Population Bangladesh is not only the eighth most populous country in the world and one of the poorest, but, among major states, it also has the highest population density – nearly 950 people per square kilometer. Bringing the population growth rate down to an annual average of 1.5 percent during the 1990s (lower than India’s 1.8 percent level and much lower than Pakistan’s 2.5 percent) is a major social achievement. But unless the average fertility rate (now holding steady at around 3.3) drops further, Bangladesh will be home to more than 180 million people in 2025 and to 208 million in 2050. It cannot afford to relax in its efforts to manage population growth.

Land and landlessness In the year 2000, among the poorest of the poor – the poorest 20 percent of the population – four out of five owned less than half an acre of land. Not only did many own no acreage at all, but landlessness has been increasing in rural Bangladesh along with the number of small and marginal farms. The 2000 HIES found nearly half (48 percent) of the country’s rural population to be effectively landless, owning at most 0.05 acres. Roughly three-fifths of all households in the two poorest quintiles fell into that category.

Job Creation Again, Bangladesh has done well in adding jobs for about one million new entrants to the work force every year since 1990-91. Many of them, moreover, have been filled by women, notably in the buoyant textile and apparel industries that have profited from reforms in the late 1980s and early 1990s reducing the once-strong bias against exports and positioning Bangladesh to compete in global markets. The country’s economy has done well in another sense: the services sector has been the main source of new jobs, growing at 4.2 percent a year. But it must do better

over the coming years to provide productive and gainful employment opportunities for the vast number of underemployed people as well as for the expanding workforce.

Education, Literacy and Child Labor In educating the workers of tomorrow, at least, Bangladesh appeared to be gaining ground during the nineties. More than doubling its (low) level of government spending on primary education, it managed to enroll nearly equal proportions of boys and girls and of urban and rural children. It raised the percentage of the population that completed Grade 5 from 44 percent in 1991-92 to 56 percent in 2000. National literacy rates for Bangladeshis 7 and older grew only from 26 to 32 percent between the censuses of 1981 and 1991, but by 2000, 45 percent of Bangladeshis were considered literate. Not only were rural gains greater than urban ones, literacy among women also spread faster than among men.

But these apparent successes are matched or over-matched by grim realities. At the end of the decade, 55 out of every 100 citizens from the age of 7 up could neither read nor write. Moreover, an unwelcome surprise, primary school enrollments as a percentage of the relevant age group actually fell somewhat in the last half of the 1990s; an estimated quarter of 6-10-year-olds who should be in class are not. Their absence may reflect the low quality of teaching imparted in schools given the low level of spending per pupil, but also other factors such as a household's perceived need for the earnings of its younger members. Despite progress during the 1990s in lessening the number of child laborers – from 5.6 million in 1995-96 to 4.3 million in 1999-00 – fully one-fourth of children 10-14 years of age are estimated to be working rather than studying.

Health Finally, Bangladesh's record in improving public health is a composite of heartening achievements balanced or outweighed by grave shortcomings. Halving population growth rates over two decades – from 3 percent in the 1970s – is a cause for justified congratulation. For the great majority, in addition, drinking and cooking water now come from tubewells rather than from less sanitary surface water, and Bangladeshis' access to sanitation – though available still to just 35 percent of the population – is more than twice as extensive as in India. Similarly, infant mortality rates have dropped by nearly a quarter, from 87 to 66 per 1,000 live births, between 1989-93 and 1995-99. More than 92 out of every 100 children under 5 years have received at least one vaccine, poor youngsters almost as frequently as the non-poor.

Poor children remain seriously vulnerable to malnutrition and their mothers to death in childbirth. Two recent surveys found between 13 and 19 percent of Bangladeshis from the ages of 6 months to 6 years to be severely underweight or stunted in their growth. Such levels are among the highest in the world, exceeded only by North Korea (in the proportion of underweight youngsters) and by North Korea, Bhutan and Cambodia (in terms of stunting). The fight against malnutrition has, in fact, advanced strongly in the last decade, but with the world's second highest (after India) rate of underweight newborns, Bangladesh cannot rest on its laurels. Nor can it neglect the reality that over 60 percent of children are stunted in the poorest 20 percent of its households.

The maternal mortality rate, estimated at 392 deaths per 100,000 live births, is among the highest outside sub-Saharan Africa, and the vast majority of infants are born at home. Trained health workers attend only 12 percent of births. Even though the percentage of women seeking pre-natal consultations doubled during the 1990s, at least one mother in three gives birth without ever having seen a health practitioner. Like all the countries that have subscribed to the Millennium Development Goals, Bangladesh aims to have skilled staff attending the vast majority of births by 2015. Time is short.

BANGLADESH AND THE MILLENNIUM DEVELOPMENT GOALS

MDG	BANGLADESH'S POSITION, AND LOOKING BEYOND THE GOALS
ERADICATE EXTREME POVERTY AND HUNGER	Progress, with poverty rates declining from 59% to 50% over the last decade. Poverty rates and absolute numbers still very high; considerable urban-rural and regional disparities; GDP growth at 6-8% needed to cut incidence significantly.
	Progress in reducing child malnutrition, with prevalence of stunting, wasting and underweight reduced by 20-25% over decade. Significant challenges remain: close to half the children stunted or underweight. Integrated approach across sectors needed to maintain rate of progress. This should include creating knowledge of health practices.
ACHIEVE UNIVERSAL PRIMARY EDUCATION	Large increase in enrollment rates in 80s-90s. However, survey-based estimates show stagnation in enrollment during second half of 90s. Need to improve quality of education; problems of governance continue to plague the system.
	12.5 percentage points improvement in literacy over the last decade, but the literacy rate continues to be extremely low (45% among 7+ years). Universal coverage of primary education important tool to boost rates; adult literacy programs need better delivery system.
PROMOTE GENDER EQUALITY AND EMPOWER WOMEN	Ratio of girls to boys in primary and secondary school close to or above parity. Decline in boys' (aged 6 – 15 years) enrollment indicated by recent surveys is cause for concern.
	Progress in increasing women's participation in public life and in the formal labor market, but female labor force participation continues to be quite low.
REDUCE CHILD MORTALITY	Drop in IMR from 87 in 1989-93 to 66 in 1995-99. Decline in CMR from 133 to 94 over the period. However, large disparities persist across income groups.
IMPROVE MATERNAL HEALTH	At 392 per 100,000 live births, MMR among highest outside Sub-Saharan Africa. Cross-sectoral approach needed (including behavioral change and massive training of midwives, given that 95% deliveries occur at home) to lower mortality rates. Births attended by skilled staff extremely low, around 12% in 1999-00.
ENSURE ENVIRONMENTAL SUSTAINABILITY	Remarkable progress achieved in access to improved water sources by spreading tubewells virtually universally. Rapid urbanization poses new challenges. Arsenic contamination threatens gains achieved.
	Energy use the lowest among South Asian countries. Only 30% of the population has access to electricity. Structural reforms in the energy sector needed.

Sources: Bangladesh Demographic and Health Surveys, Household Income and Expenditure Surveys, Education Watch Study, Bangladesh Human Development Report, World Development Reports.

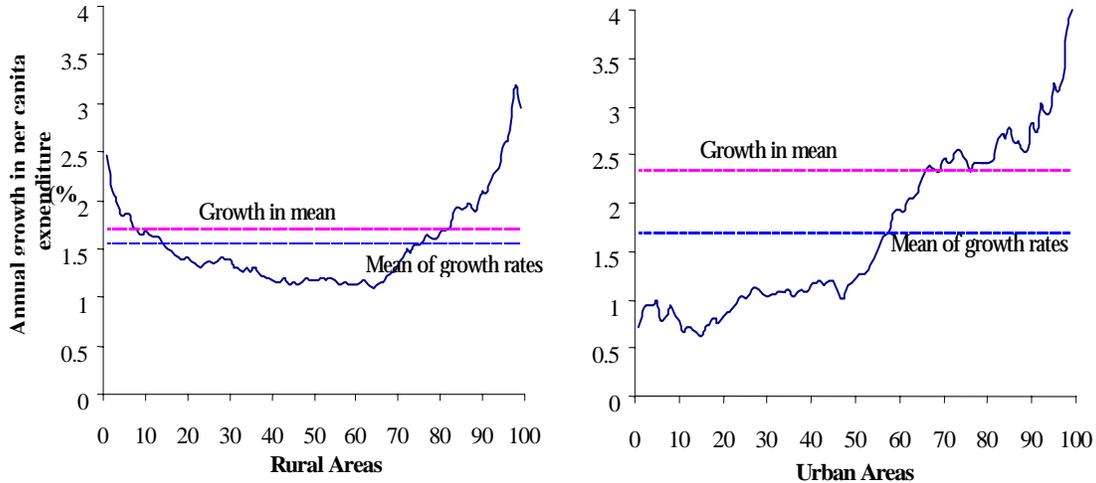
The Impact of Growth

The decline in poverty in Bangladesh stems in large part from strong, decade-long economic growth. The economy's expansion during the 1990s – an average, annual GDP increase of almost 5 percent – meant a rise in real, per capita GDP of 36 percent or twice the average rate of other low- and middle-income countries in the same decade. This impressive performance was fueled by the 86 percent jump in real GDP in the expanding industrial sector where the output of export-oriented, ready-made garment (RMG) enterprises grew by double-digit increments. Even in agriculture, whose share of GDP dropped even though it remained the country's main source of employment, aggregate production reached approximately 25 million tons in FY 2000, when the country also attained self-sufficiency in food grains. In 2000, not only were there fewer people living in extreme poverty as compared to the start of the decade, but the poor were on average better-off compared to previous decades.

Fewer people were in extreme poverty, but inequality increased during the decade. Real per capita expenditures grew annually by 1.9 percent during the nineties, but incomes grew much faster for some households than for others. Had growth been more broad-based, the cumulative decline in poverty would have been much greater than the 9-percentage-point drop observed during the decade. The contrasting experience of rural and urban areas in Bangladesh is instructive in this context. Although the yearly average rises in rural and urban per capita expenditures – 1.7 percent

and 2.3 percent, respectively – differed markedly, growth in rural areas was more broad-based and resulted in an equivalent decline in poverty.

Rural and Urban Growth incidence curves, 1991-92 to 2000

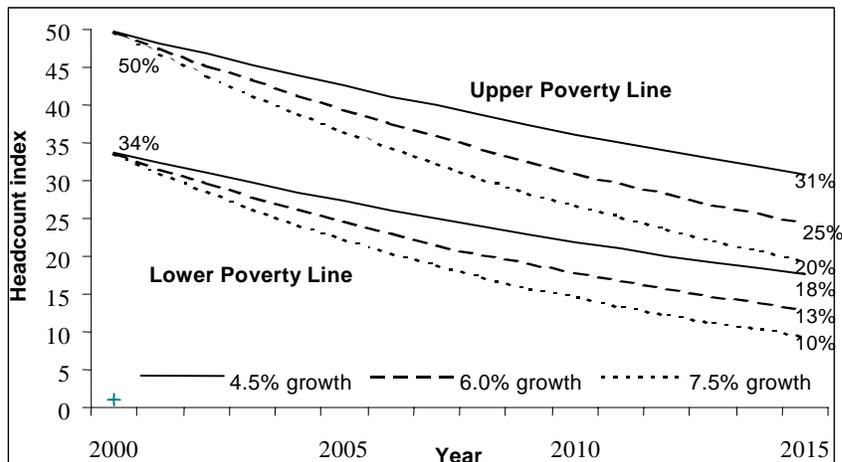


% of population ranked by per capita expenditures

The fuel for rural economic expansion came from both farm and non-farm activities, a mix that will have to continue to achieve sustained poverty reduction in coming years. The non-farm rural economy – composed of trade, transport, manufacturing, processing, retail sales and services and the like – holds significant potential for further, strong growth. Accordingly, poverty-reduction policies will need to capitalize on that growth potential.

The trouble is, though, that growth may be slackening. Early indications are that Bangladesh’s economy will expand by less than the previous annual 5 percent average in 2002. Slower progress on structural reforms, rising fiscal deficits in recent years, the shaky condition of many government-owned financial institutions and of many more state-owned enterprises combine to threaten both government budgets and national economic growth.

Poverty Projections under Alternate Growth Scenarios



Stronger, not weaker economic expansion is essential to close the gap between Bangladesh's current status and the heights it hopes to reach by 2015. To have the resources to meet the MDG target on poverty in 2015, the Bangladesh economy must grow faster than it ever has. Multi-year projections are, at best, approximations of the future, but such extended estimates indicate that Bangladesh will need to achieve an annual average 6-percent GDP growth to bring the current 50-percent incidence of poverty down to 25-percent over the next dozen-plus years. That seems like a tall order, but it has been filled elsewhere. Bangladesh's not-so-distant neighbor, Vietnam, where per capita GDP equals that of Bangladesh, where population growth is not much higher and where urbanization is somewhat lower is one example. There, from 1992 to 1998, yearly GDP growth averaged 8.4 percent a year, and poverty decreased by 21 percent.

Accelerating and Making the Most of Growth

Broad-based accelerated economic expansion can effectively propel scores of millions of Bangladeshis out of poverty in the next dozen years or so. The momentum must reach levels the country has not consistently recorded before, but the momentum of the 1990s set records as well. How best can Bangladesh meet the twin challenges of accelerating the rate of growth and maximize its potential for poverty reduction by ensuring that it is more broad-based? For economic growth to embrace and strengthen the poor, the policies designed to stimulate growth must focus on letting the poor maximize the value and earning power of their current assets and on enabling them to increase their holdings.

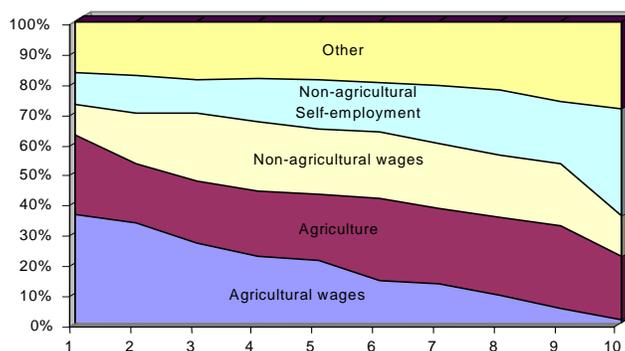
Devising strategies to achieve this objective requires knowledge of the main activities and sectors from which the poor derive their livelihoods. Inventorying the various forms of capital that the poor possess or lack, as well as exploring their main sources of income, show that:

- While income earning strategies are heterogeneous across households, even among any single income decile, one of the marked differences distinguishing the income earning strategies of the poor from the rich is their tremendously high reliance on daily wage income.
- Labor markets offer significant premiums to education. The greater the number of years spent in school, the higher is income. Bangladeshis in the top decile of per capita expenditures average 7 times as many years of schooling as those in the bottom decile.
- Land ownership is out of reach of most Bangladeshis living in hard-core poverty in rural areas. Yet even households that own up to half an acre average per capita expenditures 7 percent higher than those of their landless neighbors.
- Poorer households hold a greater share of their asset endowment in relatively more liquid assets such as livestock and financial assets, and relatively less in land, other farm assets, or family-owned enterprises.
- Natural and common property resources in Bangladesh are an important source of livelihood for poor households. In communities where villagers have access to such common property as khas land, expenditures are 2-3 percent above less fortunate locales.
- Non-farm employment offers significant premiums relative to agricultural daily work. Employment for men in manufacturing or other non-agricultural occupations provides a 25-34 percent premium compared to daily wage work in agriculture, even after controlling for differences in education and other individual and locational characteristics.
- Non-farm activities in small and medium-sized household enterprises hold high promise of growth with direct impact on rural poverty, already employing some 1.7 million people. Yet in

roughly three-fourths of such enterprises, the main source of financing to establish the enterprise was household savings or inheritance. By contrast, NGO micro credit and lending from agri/commercial banks was the main source in only 4 and 1 percent of the cases respectively.

Data on labor force employment patterns shows, somewhat predictably, farming, raising livestock and fishing to be the primary occupations for 61 percent of working men and 56 percent of working women in the countryside. Less expectedly, however, trade, transport, manufacturing and other non-farm work provide the chief source of employment for about 40 percent of the rural labor force whether poor or non-poor. Bangladesh’s rural poor are adapting to a significant extent to a changing economic setting. Daily wage income and salaries provide close to half of the total income of the poorest fifth of the population, but even for the poorest tenth 40 percent of total income comes from non-agricultural sources. Among the rural poor, from one-fifth to one-third of income derives from non-agricultural activities either as wages or self-employment earnings, and the percentage rises at higher income levels. The familiar concept of the rural poor as tied to relatively unskilled cultivation may therefore be a stereotype that somewhat misrepresents an emerging reality. It also misses the rise in labor force participation rates of women working outside their home from 14 percent in 1990-91 to 23 percent in 1999-00. Of that growing number, more than two million earn wages in manufacturing, half of them in the textile and apparel industries as migrants, in many cases, from impoverished villages and rural households.

Agricultural versus Non-Farm Sources of Income, Rural Areas



Agriculture: Since 85 percent of Bangladesh’s poor live in rural areas where agriculture is the predominant activity, accelerating growth in agriculture through raising productivity of existing crops and diversification will be crucial. With the poor being predominantly landless, improvements in the operation of land markets, including tenancy and sales, are necessary to help them strengthen their position in the rural economy. The continued development of livestock and fisheries – which are important assets for the landless – as well as better management of common property resources in environmentally sustainable ways that benefit them rather than better-off households would be of particular importance to the poor. In addition, purposeful outside assistance can help the agricultural sector improve the yield from crops, especially rice; diversify into cultivation of crops that bring notably higher per-acre revenues than rice and wheat; and through greater attention to research and improving markets.

Micro-Credit: For the poor to gain equitably from economic growth in the off-farm sector, they need more than the ability to trade places – from rural to urban – or to practice an off-farm trade. They need assets beyond their labor to invest in widening opportunities. Financial assets in the

form of micro credit are more available to the rural poor than land, thanks to successful innovations adopted by various non-governmental organizations in Bangladesh. However, despite tremendous progress in this area, there is still considerable scope to extend the reach of micro credit financial institutions and of formal-sector lenders, as evidenced by the high dependence of small household-based enterprises on inheritance, savings, and other personal sources to set up their businesses. NGO micro credit and lending from agri /commercial banks represents only a small share of the needed funds and unless their market shares rise, the rural credit market itself is not likely to be a powerful enough engine of non-farm growth and poverty reduction.

Human Capital: Given that the chief asset for the poor in Bangladesh is their labor, the need to invest soundly in building human capital is clear. Basic education is critical to ensure that everyone can participate in and benefit from growth. Government policies and budgetary allocations have rightly focused on human development, and spending on primary education, child care, and pre-natal care have benefited the poor the most. On the other hand, public spending on secondary and higher education and on curative care is less equitably distributed. While allocating public resources to priority sectors such as child nutrition, education and health is important, higher resource allocations in and of themselves are not enough: how these resources are used is also of crucial importance. Better targeting of nutrition interventions and emphasis on fostering behavioral change through communication will be necessary – indeed critical – to shrink the incidence of malnutrition among children.

Encouraging Investment: The overarching poverty-reduction challenge in the decade ahead is to ensure that higher nationwide economic growth liberates the poor, especially in the countryside, to build productive assets. The range and variety of those private and public assets is large, even if – taken separately – a fifth-grade education, a nearby all-weather road, half-ownership of an irrigation pump, a reliable dairy cow and a flock of chickens, or a sewing machine seem like very limited capital. To ensure that economic growth embraces and strengthens the poor, the policies designed to stimulate growth must also focus on letting the poor maximize the value and earning power of their current assets. While relatively little attention has been devoted to this topic in the past, the government’s responsibility for creating and maintaining an enabling environment plays a crucial role in influencing the level of returns to private assets. If farms and firms cannot operate profitably because of macroeconomic instability, poor infrastructure, or bureaucratic harassment, facilitating the accumulation of private assets will bring only limited benefits.

Prioritizing Use of Governmental Resources: Correcting the deterioration that has taken place in government finances in recent years and imposing strong discipline on the many wasteful state-owned enterprises would do much to help restore fiscal order and macroeconomic stability. Improvement in fiscal management during FY02 as well as GOB’s decision with regard to Adamjee Jute Mills have been bold corrective measures undertaken in response to these policy imperatives. The government also needs to address various infrastructure deficits – roads, electricity, water transport facilities, etc. – that add costs to transactions of all sort. Local public infrastructure is important both in the development of a modern agricultural sector as well as in spurring growth in the non-farm sector. The analysis presented in this report shows strong correlations between availability of infrastructure and per capita expenditures, even after controlling for various individual characteristics. Improvements in infrastructure will be necessary to accelerate growth, emphasizing upgrading and maintaining existing infrastructure along with selectivity and investment in strategic areas so as to correct geographic imbalances and complement new directions of the economy.

Improving Governance: A final set of high-level official responsibilities falls under the seemingly amorphous heading of “governance”. In practice, the problems to be addressed are very real. For instance, the findings of a recent nationwide study on governance point to breakdown of law enforcement in the country as the top concern for both rank-and-file citizens and entrepreneurs alike. Similarly, extensive reform of the state-owned financial institutions is needed to make them better conduits of credit to the poor. To respond to their needs, the formal banking system needs to respond with flexibility, outreach, and energy. Likewise, another specific area where improvements in governance are urgently needed is to reduce the level of leakage from the various food assistance programs. In order to minimize losses, a number of specific measures are proposed in this report, ranging from emulating the design features of programs with lower system losses, piloting new initiatives such as smart cards, to institutionalizing other monitoring tools (e.g. survey-based assessments, public expenditure tracking surveys, citizen report cards, etc.) to improve accountability.

In preparing its PRSP, Bangladesh encounters an unprecedented opportunity to draw on widespread backing for the process of devising a long-term comprehensive strategy for poverty reduction. Not only are various domestic agents of change such as the government, civil society, and the academic community resolutely engaged; the entire international community has also pledged full support to the process. Following the recent parliamentary elections, there is a strong political impetus for change. To ensure that economic growth embraces and strengthens the poor, the policies designed to stimulate growth must focus on letting the poor maximize the value and earning power of their current assets and on enabling them to increase their holdings. That is easier said than done, but it can be done, and Bangladesh, building on what it has done, can do more.

KEY FINDINGS

Trends in the Economy

Good growth performance during the 1990s: GDP growth averaged about 5 percent per year, with per-capita GDP increasing by about 36 percent over the decade, twice the average for low and middle income countries over the same period. Industry was the fastest growing sub-sector, with 86 percent aggregate increase over the decade. Output in the services and agriculture sub-sectors increased by 50 percent and 33 percent respectively during this period.

Trends in Consumption-based Poverty and Inequality Measures

The headcount poverty rate in Bangladesh declined from 59 percent in 1991-92 to 50 percent in 2000. Although the poverty gap and squared poverty gap yardsticks also show decline in poverty over the decade, some evidence – conflicting with other data – shows the great bulk of poverty reduction coming in the first half of the 1990s.

Progress in reducing poverty incidence was equal across urban and rural areas, with rural areas performing better in lowering the depth and severity of poverty. Dhaka division had the largest decline in poverty over the decade; poverty rates stagnated in Chittagong division.

Income inequality in Bangladesh rose considerably over the decade. Though all income strata gained, growth benefited the poorest and relatively affluent more than the middle class. Growth in rural areas appears to have been more broad-based than in urban areas. There, faster rates of growth were accompanied by a considerable rise in inequality as a result of which the magnitude of the overall decline in poverty matched that in rural areas. Significant net rural-urban migration over the decade may also have contributed to comparatively lower rates of poverty reduction in urban areas.

Trends in Non-Income Measures of Living Standards

Data on food consumption patterns confirm the fall in poverty during the nineties. Anthropometric data from various household surveys indicate good progress in reducing child malnutrition, and significant improvements in infant and child mortality, as well as in associated measures of life expectancy. Bangladesh's achievements in reducing fertility have been substantial, though there are indications that the total fertility rate may have plateaued in recent years. Progress in increasing literacy and school enrollments during the nineties has been less encouraging, with the quality of education provided in the schools generating considerable and rising concern.

Bangladesh has made commendable progress in reducing vulnerability on several fronts, especially with regard to enhanced food security, and in strengthening disaster coping mechanisms. However, various types of risks of deprivation continue to face the country's population and to pose significant challenges.

Profile of the Poor

The poor in Bangladesh tend to have low levels of education, have limited access to land, and are highly concentrated in low paying, physically demanding, and socially unattractive occupations as casual wage laborers. In both urban and rural areas, where the poor lack much access to modern amenities and services, they also tend to live in houses of inferior quality. While poverty rates do not appear to be strongly correlated with religion or gender of household head, those female-headed that are widowed, divorced or separated have a considerably higher incidence of poverty relative to others.

1. PROGRESS IN POVERTY REDUCTION DURING THE NINETIES

1.1 INTRODUCTION AND OVERVIEW:

1.1 As is now widely acknowledged, poverty encompasses deprivation in well-being, not just as measured by income or consumption poverty, but also inferior outcomes in areas like education and health, and in vulnerability and powerlessness as well. This report takes this broader view of poverty, both in asking how it has evolved in Bangladesh in recent years, and in discussing measures to tackle it. Following a brief assessment of trends in economic growth in different sectors, this chapter examines trends in consumption-based poverty and inequality as well as non-income measures of well-being. Despite recent achievements, the analysis reveals that the magnitude of development challenges facing the country is daunting.

1.2 There is consensus in Bangladesh on the important developmental priorities and challenges confronting the country. Among the major issues that different stakeholders identified during consultations recently commissioned by the government included:

“lack of physical infrastructure, law and order, organized crime, extortions and economic violence, lack of effective local government and decentralization, quality of education, health, and other social services, lack of coordination among development agencies and institutions, lack of remunerative employment and economic opportunities, lack of social capital at the community level, resulting in low-level of collective action, and lack of democratization of political process.”¹

1.3 Officials are currently preparing the country’s Interim Poverty Reduction Strategy Paper (I-PRSP). The Government’s evolving strategy to accelerate poverty reduction focuses on five broad thrusts: (a) expanding the scope for pro-poor economic growth, (b) fostering human development of the poor, (c) support women’s advancement and closing of gender gaps in development, (d) providing social safety nets against unanticipated shocks, and (e) strengthening participatory governance and enhancing the voice of the poor (GOB 2002). As discussed at length in this report, the strategic principles underpinning this strategy are sound and appropriate to the development challenges facing Bangladesh. However, the ultimate test for GOB will be its effectiveness in translating these strategic principles into concrete, productive actions, and in developing mechanisms to monitor the results. The central purpose of this report is to help inform the preparation of the PRSP by synthesizing the main findings of analytic work on poverty recently commissioned by the World Bank and Asian Development Bank.

1.4 The analytic framework used in the report follows that presented in the 2000/2001 World Development Report.² The work of poverty reduction has several dimensions. Its aim is to employ the best possible means to assist people to build their personal assets and maximize their return on them through complementary inputs and a supportive overall environment that shields both assets and owners against volatility and risk. Chapter 2 provides a profile of the main sources of income and assets of households in Bangladesh, mainly with a view to identifying the key assets and income sources of particular importance to poor households. The analysis highlights selected strategies and actions that would help build assets for poor households and raise the level of returns to those assets by mobilizing complementary public actions and support and by constructing an enabling environment that helps accelerate growth. Chapter 3 discusses human capital, in particular education,

¹ Memorandum for the Bangladesh Development Forum 2002-2003, Ministry of Finance, Government of Bangladesh.

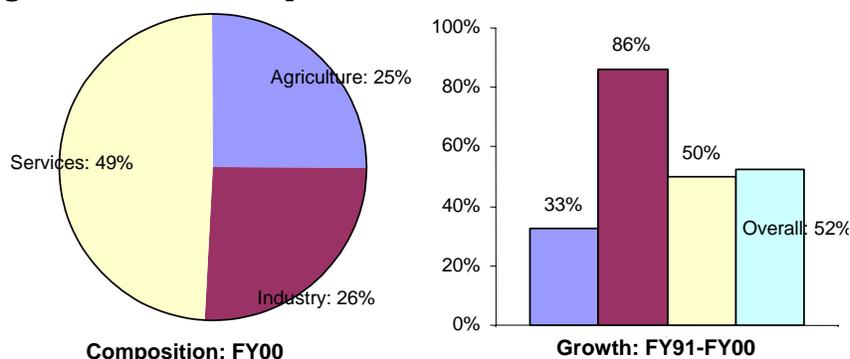
² World Bank. 2001a. *World Development Report 2000/2001: Attacking Poverty*. Washington D.C.

health, and child nutrition. Along with an overview of recent progress in these areas, the chapter also assesses the main challenges ahead as well as some actions that could help the country meet them. The Government of Bangladesh has in place a wide array of social safety net programs designed to help households cope with volatility arising from income shocks or the impact of natural disasters and to help build key private and public assets for the poor. Chapter 4 provides a brief introduction to GOB's main social safety nets, weighs their success in reaching the poor, and discusses measures to improve their targeting and effectiveness. Chapter 5 concludes with a discussion of how Bangladesh's progress compares to other countries and the need for improved monitoring and evaluation systems to better track and improve upon this progress.

1.2: TRENDS IN THE ECONOMY:

1.5 ***Bangladesh achieved a good growth performance during the nineties.*** Between 1991 and 2000, real GDP in Bangladesh increased by 52 percent, averaging a growth rate of about 5 percent per year. Combined with the country's notable success in reducing the population growth rate over the past two decades, this economic performance resulted in real per capita GDP's rising by 36 percent over the decade, twice the contemporary gains of low and middle income countries (World Bank 2001a).

Figure 1.1: Sectoral Composition of GDP and Growth over the Nineties



1.6 Economic growth was most robust in the industrial sector, which increased in importance from 21 percent to 26 percent of GDP, with its real GDP rising by an impressive 86 percent during the nineties (Figure 1.1). The export-oriented ready-made garment (RMG) sector recorded double-digit annual growth. The share of the services sector remained unchanged at about one-half of GDP, while agriculture – the slowest growing of the three sectors – declined in importance from 29 percent to 25 percent of GDP. Even within the agricultural sector, however, notable achievements marked the period. The country attained food grain self-sufficiency in FY2000 and estimated aggregate production reached approximately 25 million tons. Despite its declining importance, agriculture continues to be the main source of employment in Bangladesh.

1.7 The impressive growth performance over the nineties can be attributed in large part to prudent macroeconomic management, as well as to wide-ranging reforms introduced in the 1980s and reinforced in the early 1990s. These reforms included steps to remove excessive direct controls on economic activity, liberalize foreign trade, deregulate the investment climate, and generally introduce more market-oriented policies to create a more supportive policy environment for the private sector. Rapid integration with the global economy saw the ratio of Bangladesh's trade to GDP more than double while domestic inflation remained at low levels throughout the decade.

1.3: TRENDS IN CONSUMPTION-BASED POVERTY AND INEQUALITY MEASURES:

1.8 *Consistent with the growth performance, survey-based consumption poverty estimates confirm that the nineties were a period of declining poverty.* This report uses the cost-of-basic-needs (CBN) method for estimating poverty, whereby any household with real per capita expenditure below a given poverty line is considered as poor.³ Analysis of various Household Expenditure Surveys (HES) conducted by BBS during the decade shows that the incidence of poverty, as measured by both the upper and lower CBN poverty lines, has fallen considerably (Table 1.1 and Background paper 1). In 2000, 50 percent of the country's population was poor (as measured by the upper poverty line), compared to 59 percent in 1991-92. Similarly, the extreme poverty rate (below the lower poverty line) declined from 43 percent in 1991-92 to 34 percent in 2000. Thus, according to both measures, the incidence of poverty in Bangladesh declined by about 9 percentage points over the nine-year period.

Table 1.1: Trends in CBN Poverty Measures

	Upper Poverty Line			Lower Poverty Line		
	1991-92	1995-96	2000	1991-92	1995-96	2000
HEADCOUNT RATE (P₀):						
National	58.8	51.0	49.8	42.7	34.4	33.7
Urban	44.9	29.4	36.6	23.3	13.7	19.1
Rural	61.2	55.2	53.0	46.0	38.5	37.4
POVERTY GAP (P₁):						
National	17.2	13.3	12.9	10.7	7.6	7.3
Urban	12.0	7.2	9.5	4.9	2.6	3.8
Rural	18.1	14.5	13.8	11.7	8.6	8.2
SQUARED POVERTY GAP (P₂):						
National	6.8	4.8	4.6	3.9	2.5	2.3
Urban	4.4	2.5	3.4	1.5	0.7	1.2
Rural	7.2	5.3	4.9	4.3	2.8	2.6

Source: BBS and World Bank staff estimates.

1.9 The poverty gap (P1) estimates how far below the poverty line the poor are on average as a proportion of that line. The squared poverty gap (P2) takes into account not only the distance separating the poor from the poverty line, but also inequality among the poor. Trends in these measures broadly mirror observed changes in the headcount rates, suggesting that even among the poor, a greater share of people are now closer to the poverty line than they were at the beginning of the decade.⁴ It is also worth noting that these distributionally sensitive poverty measures (P1 and P2) declined relatively more rapidly than the headcount rate.

1.10 Although the progress is heartening, the overall incidence of poverty (50 percent) remains very high. In terms of the total number of individuals living below the poverty line, the picture is sobering. The total population living below the upper poverty line in 2000 remained virtually unchanged (at about 63 million) compared to 1991-92, and the number of Bangladeshis living below the lower poverty line declined only modestly from 45.2 million in 1991-92 to 42.5 million in 2000.

³ The methodology used to derive the consumption aggregates and poverty lines on which the various poverty measures are based, and a description of the various poverty measures, is presented in the Technical Appendix.

⁴ A range of alternative poverty lines yield similar trends in poverty. Appendix Figure A1.1 shows the cumulative distributions for monthly real per capita expenditures (PCE) in Bangladesh (national, urban, and rural, respectively) for the three years. First-order stochastic dominance of the cumulative distributions of real PCE in 2000 over the 1991-92 distributions in both urban and rural areas confirms that trends in poverty during the decade would be similar over the range of virtually all possible poverty lines.

1.11 **Progress in reducing poverty incidence was equal across urban and rural areas, but the latter did better in reducing the depth and severity of poverty.** Although average per capita expenditures increased much faster in urban areas,⁵ the overall decline in poverty incidence during the decade was roughly equal across the two sectors.⁶ However, trends in the P1 and P2 measures suggest that rural areas experienced greater reductions than urban areas in the depth and severity of poverty, which in turn is probably due to growth in rural areas being more pro-poor than in urban areas (see related discussion later in this section).

1.12 A sectoral decomposition of the change in national poverty incidence into intra-sectoral changes and inter-sectoral changes due to migration suggests that the rural sector, with 80 percent of the population, contributed 78 percent of the total decrease in national poverty estimates between 1991-92 and 2000. The urban sector contributed about 13 percent of the national poverty decline (Background paper 2). Migration from rural to urban areas where poverty is lower also decreased the national poverty rate, accounting for about 10 percent of the decline.

1.13 **In addition to sectoral variation, poverty incidence and progress also differ across regions.** Aside from the tendency of urban households to be better off than rural ones, large differences in poverty incidence also occur across regions and between urban and rural areas within those regions. For instance, Dhaka administrative division has a much lower incidence of poverty than Rajshahi. Progress in poverty reduction was also unequal across regions, with rapid progress in Dhaka and virtual stagnation in Chittagong division (Table 1.2). The rapid reduction in poverty in Dhaka division is not surprising, given Dhaka's importance as the administrative, political, and financial center of the country. In fact, one of the reasons why poverty in Dhaka did not decline even more may have been the influx of poor migrants from other parts of the country.

Table 1.2: Regional Trends in Poverty

	Headcount Rate (%)			Annual Growth in mean per-capita expenditures (%)
	1991-92	2000	Change	
All Divisions	58.8	49.8	-9.0	2.4
Chittagong	46.6	47.7	1.1	1.5
Dhaka	59.3	44.8	-14.5	3.2
Khulna*	59.6	47.0	-12.6	2.1
Rajshahi	71.9	61.0	-10.9	2.4

* Including Barishal division *Source:* BBS and World Bank staff estimates.

1.14 **Despite better progress in reducing extreme poverty in rural areas, most of the poor continue to reside in such surroundings.** By all consumption-based measures, poverty in rural areas continues to be higher than urban poverty, and the rate of severe poverty remains twice the urban rate – 19 percent in 2000. Combined with the fact that four-fifths of the total population resides in rural areas, so does an overwhelming share of the poor: 85 percent in 2000, somewhat lower than the 89 percent share in 1995-96. The largest number of the poor live in Rajshahi, followed by Dhaka and Chittagong divisions (Table 1.3). Mounting a sustainable attack on poverty must ensure that achievements in the future translate into robust economic growth in rural areas.

⁵ The HES data show real per capita expenditures to have increased by 27 and 16 percent respectively in urban and rural areas between 1991-92 and 2000.

⁶ During the 1990s, the overall decline in poverty in Bangladesh as a whole (9 percent) was greater than in either urban (8.3 percent) or rural (8.2 percent) areas because (i) the urban share of population increased significantly during the period, and (ii) the incidence of urban poverty was considerably lower than in rural areas.

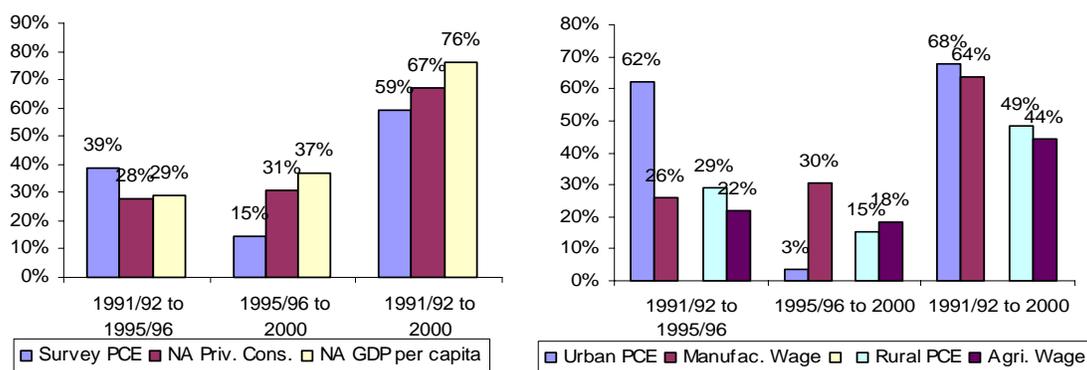
Table 1.3: Total Number and Distribution of Poor in Bangladesh: 2000 HIES

	URBAN		RURAL		OVERALL	
	Number of Poor ('000)	% of Total	Number of Poor ('000)	% of Total	Number of Poor ('000)	% of Total
All Divisions	9,263	15%	53,478	85%	62,741	100%
Chittagong	2,470	4%	13,455	21%	15,925	25%
Dhaka	3,652	6%	14,064	22%	17,716	28%
Khulna*	1,359	2%	9,756	10%	11,115	18%
Rajshahi	1,783	3%	16,203	26%	17,985	29%

* Including Barishal division: Source: BBS and World Bank staff estimates.

1.15 **Did the pace of poverty reduction slow over the second half of the nineties?** While the overall magnitude of poverty reduction during the decade has been encouraging, some troubling signs suggest that the pace of poverty reduction may have slowed over its latter half. The HES data show poverty nationwide to have fallen by almost 8 percentage points between 1991-92 and 1995-96, but then only by one percentage point between 1995-96 and 2000. Rural poverty declined throughout the nineties, though at a considerably more rapid rate during the first half than afterwards (6.0 points drop vs. 2.2 points, respectively). In urban areas, the HES series show poverty to have fallen a spectacular 15.5 percentage points up to 1995-96, but then to have *increased* by about 7.2 percentage points through 2000.

1.16 The pattern of decline in poverty over the two halves of the decade indicated by the HES series is quite different from that suggested by other data sources. While the HES and National Accounts (NA) estimates are fairly consistent with regard to growth in per capita expenditures over the nineties as a whole, the two series present differing snapshots of the pattern of growth in the two halves of the decade. The HES series shows most of the increase in PCE to have taken place in the first five years, while the NA series indicates a very similar magnitude of change over the two periods. According to the HES series, nominal per capita expenditures increased by 39 percent between 1991-92 and 1995-96, but by only 15 percent between 1995-96 and 2000. The NA, by contrast, show per capita private consumption to have increased first by 28 percent and then by 31 percent. (Figure 1.2).

Figure 1.2: Contrasting Progress over the First and Second Half of the Nineties

1.17 Which of the two – the HES or the National Accounts – gives the correct picture? In the absence of clear evidence in support of either set of findings, it is difficult to make a definitive assessment. On the one hand, trends in rural per capita expenditures reported by the HES are consistent with trends in the agricultural wage index over the same period. However, it is difficult to

reconcile the 62 percent and 3 percent increases respectively in urban per capita expenditures during the first and second periods reported by the HES with trends in the manufacturing wage index or with sectoral GDP growth rates. This mismatch would suggest that the HES series may overestimate growth in urban per capita expenditures between 1991-92 and 1995-96, while underestimating the increase that took place between 1995-96 and 2000.

1.18 An extensive investigation of possible hypotheses that might account for this discrepancy did not identify any single factor.⁷ A comparison of trends in welfare using other (non-HES) data sources also presents a mixed picture of how improvements during the nineties were distributed between the two halves. However, regardless of which data source or yardstick is used to assess changes in living standards, evidence of substantial poverty reduction is overwhelming. The remainder of the chapter therefore focuses on the entire decade in assessing changes in living conditions in the country.

1.19 ***Income inequality in Bangladesh rose considerably during the decade, particularly in urban areas.*** The HES data suggest that inequality in the distribution of private per capita expenditures, as measured by the Gini coefficient, increased from 0.259 in 1991-92 to 0.306 in 2000 (Table 1.4). Most of the observed increase in inequality took place during the first half of the nineties.⁸ In part, the rise in inequality over the decade reflects increased fragmentation and inequality of landholdings, as well as higher premiums enjoyed by the segment of the population fortunate enough to have relatively better skills and education. Other important factors may also have been at play in causing income inequality to rise during the nineties. Urban inequality increased much more than rural inequality during this period. Decomposing the national Gini coefficient by sector suggests that the increase in the national Gini was due not only to rising inequality within sectors, but also to rising inequality between the urban and rural sectors (Background Paper 2).

Table 1.4: Trends in Inequality: Gini Coefficients

	Upper Poverty Line			Lower Poverty Line		
	1991-92	1995-96	2000	1991-92	1995-96	2000
National	0.259	0.302	0.306	0.272	0.315	0.318
Urban	0.307	0.363	0.368	0.311	0.369	0.370
Rural	0.243	0.265	0.271	0.251	0.267	0.275

Note. The Gini coefficients are defined for the distributions of real per capita expenditures. The upper and lower poverty line estimates refer to the use of the corresponding poverty line as the regional price index for deflating nominal per capita expenditures.

Source: BBS and World Bank staff estimates.

1.20 In sum, measures of estimated consumption-based poverty illustrate substantial progress against poverty in both urban and rural areas, but the underlying process of growth appears to have been very different. Urban areas had much higher growth in average incomes, but also considerable increase in inequality, and such growth was largely concentrated among the relatively affluent. What

⁷ Alternative hypotheses investigated in depth ranged from concerns that HES datasets were not comparable across years, that the poverty trends may be an artifact of the approach used to estimate poverty lines, that household composition effects may contaminate poverty trends, and that consumption-based poverty estimates may not be capturing trends in well-being accurately. Robustness checks and sensitivity analyses related to these hypotheses are detailed in Background Paper 1. Possible explanations for the puzzle were also discussed extensively both in a Poverty Assessment Workshop organized in Dhaka in November 2001 and in bilateral discussions with the government, researchers, and NGOs in Bangladesh. No clear story emerges to explain the discrepancy between the HES and the National Accounts series.

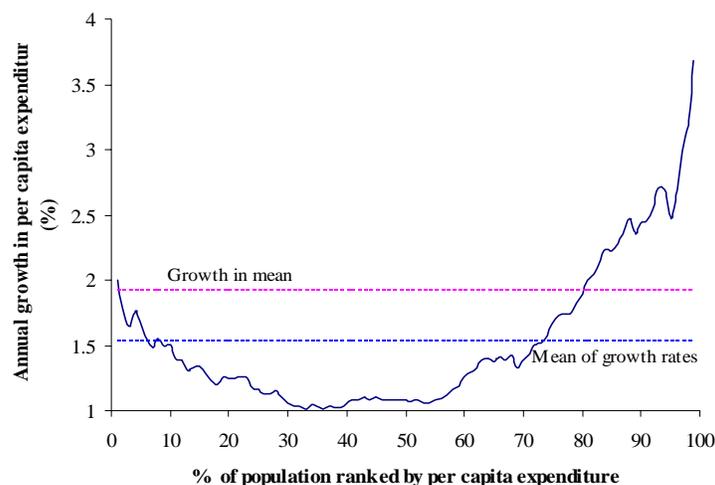
⁸ The Lorenz curves describing the income distributions for 1991-92 and 2000 do not cross, indicating that by most measures, inequality unambiguously increased over the decade. However, the Lorenz curves for 1995-96 and 2000 lie close to each other and cross around the 80th percentile, suggesting that inequality changes between 1995-96 and 2000 cannot be ranked unambiguously, and are sensitive to the type of measure used to measure inequality.

made a similar rate of poverty reduction possible in slower-growing rural areas was a growth process that was relatively more broad-based and pro-poor.

1.21 One way to assess whether growth was pro-poor is to examine the “growth incidence curve” for Bangladesh over this period, showing the growth rate of real per capita expenditure for different groups ranked by level of income (Ravallion and Chen, 2001). Decomposing the observed rate of growth in mean consumption to the constituent growth rates experienced by different income groups allows for a more detailed examination of how aggregate growth in the economy was distributed across different income groups (Background Paper 2).

1.22 ***During the nineties, all segments of the population experienced growth in incomes, but growth benefited the poorest and relatively affluent more than those in the middle-class.*** The growth incidence curve for Bangladesh for the period 1991-92 to 2000 lies strictly above zero, which shows that all segments of the population experienced growth in incomes over this period (Figure 1.3). However, growth rates varied considerably across the expenditure distribution. The growth incidence curve is U-shaped, indicating that the lowest as well as higher income groups benefited relatively more than the middle class.⁹ Annual growth in real per capita expenditures was lowest (1.1 percent) for those in the 30-50th percentiles. The bottom 20 percent of the population fared better, with annual growth rates of about 1.5 percent. By contrast, the top 20 percent of the population experienced growth rates in excess of 2.5 percent.¹⁰

Figure 1.3: Growth Incidence Curve for Bangladesh, 1991-92 to 2000



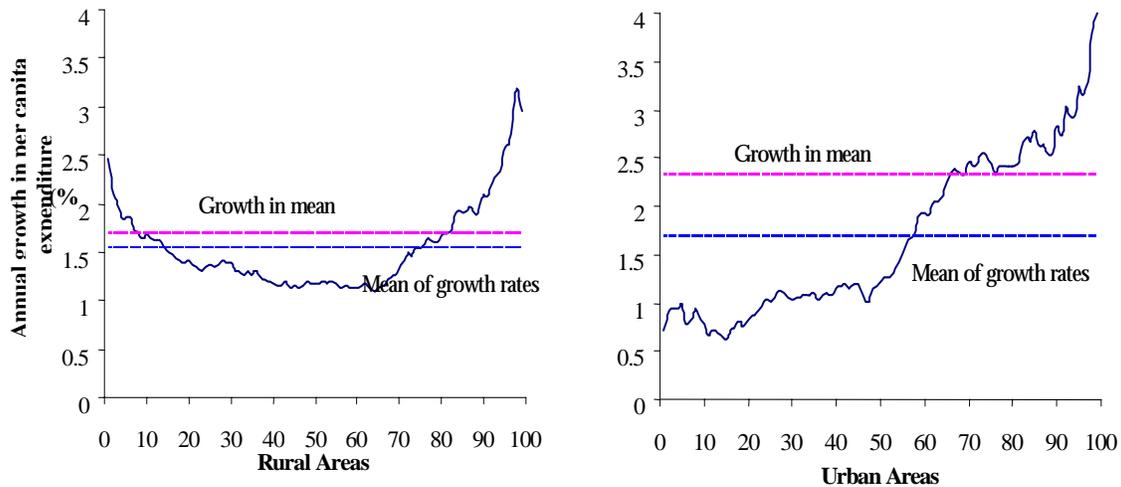
1.23 ***Growth in rural areas was broad-based while urban growth mainly benefited the relatively affluent.*** Even though average growth in mean per capita expenditures over the decade was lower in rural areas than urban ones (1.7 vs. 2.3 percent per annum), it was much more evenly distributed across income levels (Figure 1.4). As a result, poverty declined by an equivalent magnitude (about 8 percentage points) in both locales. In contrast to rural areas, the difference in

⁹ Note that phrases such as “higher income groups” or “relatively affluent” are relative concepts in Bangladesh, as even among the top fifth of the population ranked by levels of consumption, average per capita expenditures were around 1,800 taka per person per month, or a little over US\$1 per person per day (prevailing exchange rates, not PPP-adjusted).

¹⁰ Note that the mean of growth rates across centile groups (1.6 percent) was lower than the growth in the mean (1.9 percent) of PCE. This simply reflects the fact that the growth rate of mean PCE can be a misleading measure of how pro-poor growth has been since it accords a higher weight to individuals with higher PCE.

growth rates across the income distribution in urban areas is striking: the average growth rate for the bottom 20 percent was less than one-third the rate for the top 20 percent of the urban population (0.8 percent vs. 2.9 percent per annum).

Figure 4. Rural and Urban Growth incidence curves, 1991-92 to 2000



-% of population ranked by per capita expenditures

1.24 ***Virtual stagnation in poverty rates in Chittagong division is related to both slower growth and an underlying growth process that mainly benefited the rich.*** Comparing growth incidence curves in administrative divisions shows why poverty levels have stagnated in Chittagong. Not only did incomes grow at a slower pace in this region, growth in Chittagong was concentrated among the relatively affluent, with the bottom three-tenths of the population recording negligible growth rates over the decade (see Appendix Figure A1.2).

1.25 ***Did migration contribute to low growth observed for the urban poor?*** Examining the growth incidence curves for urban Dhaka and Chittagong reveals that the average growth rate for the bottom-fifth in these two cities is only a meager 0.3 percent per annum. Preliminary results from the recent population census suggest that the urban population of Bangladesh has grown roughly four times as fast as in rural areas. Higher average incomes in urban areas along with better (on average) provision of services may have attracted large numbers of the rural poor to migrate to large cities, thus contributing to the low observed rate of growth among the urban poor. Even though their incomes in their new homes are low by urban standards, they may still consider themselves better-off in their new residence. Further analysis is needed to understand the nature and causes of migration trends in Bangladesh.

1.4: TRENDS IN NON-INCOME MEASURES OF LIVING STANDARDS:

Food Consumption and Nutrition Indicators:

1.26 ***Other non-income measures of living standards also suggest declining poverty in the 1990s.*** The considerable improvement in income poverty measures over this period is corroborated not only by rising incomes, but also by significant improvements in the composition of the food bundle consumed by the population. Analysis using HES data on the average quantities of different

food items consumed reveals that per capita consumption of virtually all major food groups (with the notable exception of rice and wheat) increased substantially during this period. For instance, between 1991-92 and 2000, per capita consumption of fish increased by 9 percent, of meat by 48 percent, of poultry by 120 percent and of milk by 55 percent. While per capita consumption of wheat declined substantially and rice consumption dropped marginally (3 percent), consumption of potatoes increased by 25 percent during the 1990s. Similarly, the 13 percent decline in consumption of pulses is probably also due to substitution favoring higher-value sources of protein. Furthermore, these improvements are not confined to upper income groups: consumption of fish, meat, poultry, and milk and other such relatively high-value items by the poor increased considerably during this period in both rural and urban areas (see Appendix Figure A1.3).

Table 1.5: Trends in Various Indicators of Malnutrition

Nutrition Status Indicator	BBS Child Nutrition Surveys (% Children 6-71 months)					Bangladesh DHS (% 0-59 months)	
	85-86	89-90	1992	95-96	2000	96-97	99-00
Stunting (height-for-age)							
% below 2 std. deviations	69	66	64	51	49	55	45
% below 3 std. deviations	-	-	33	24	19	28	18
Wasting (weight-for-height)							
% below 2 std. deviations	15	15	17	17	12	18	10
% below 3 std. deviations	-	-	2	3	1	4	1
Underweight (weight-for-age)							
% below 2 std. deviations	72	67	68	57	51	56	48
% below 3 std. deviations	-	-	25	18	13	21	13

Source: Various CNS and BDHS reports

1.27 Anthropometric data from various household surveys conducted during the nineties suggests that there has also been good progress on child nutrition. For instance, stunting, wasting, and underweight indicators derived from various Child Nutrition Surveys (CNS) conducted by BBS and the Bangladesh Demographic and Health Surveys (BDHS) show considerable improvement, particularly in contrast to the relatively small improvement observed during the eighties (Table 1.5). Yet much remains to be done in this area: child malnutrition (as measured by prevalence of underweight for under-5 years children) is still among the highest in the world. This topic is taken up in more detail in chapter 3.

Mortality and Health Indicators:

1.28 As with indicators of malnutrition, data from a number of surveys as well as other sources suggest significant improvements in both child (CMR) and infant (IMR) mortality rates, as well as in associated measures of life-expectancy. Various rounds of the DHS surveys spanning the nineties show a steady decline in mortality,¹¹ findings that parallel estimates of considerably improved IMR and life-expectancy published by BBS.¹² Through a collaborative framework that has included public agencies, NGOs, and other civil society institutions in Bangladesh, immunization programs have been implemented covering major childhood diseases, and communicable diseases such as leprosy and polio have been eliminated or reduced. If current progress continues, Bangladesh and the Maldives will be the only countries in South Asia to achieve their Millennium Development Goal in the area of infant and child mortality rates.

¹¹ The BDHS series report a decline in IMR from 87 in 1989-93, to 82 in 1992-96, to 66 deaths per 1,000 live births in 1995-99. Corresponding declines in under-five mortality (i.e. CMR) are from 133 to 116 to 94 respectively.

¹² BBS IMR time-series show a modest decline from 102 in 1980 to 94 in 1990, but then a sharp drop to 67 in 1996. Similarly, estimates of life-expectancy at birth published by BBS fluctuated around 54-57 years during the 1980s, but then rose steady to 60 years by 1999-00 (cited in Bangladesh Human Development Report, 2001).

1.29 Bangladesh's achievements in reducing fertility have also been substantial. Data from the latest population census indicates that the population growth rate during the nineties averaged less than 1.5 percent per annum. However, given the population momentum of high past rates of growth as well as the extremely high population density in the country, curbing population growth further remains an important priority. The total fertility rate in Bangladesh has now leveled off at around 3.3, and since contraceptive use in Bangladesh is already quite high (53.8 percent), there is a need to broaden efforts beyond traditional family planning. Since girls continue to get married at a very early age, public policy might prove most effective in curbing further population growth if it seeks to influence the age at which women marry. In this area of behavior, Bangladesh needs to improve performance to be on par with other South Asian countries (Bongaarts and Amin, 2001).

1.30 Primary health care services provided by the government are doing a fairly good job of reaching the poor (Background Paper 6). However, as noted in the 2000 Bangladesh Human Development report, ensuring access of the poorest groups, communities, and areas to effective health care, as well as improving the state of reproductive health care, remain the most pressing concerns in the health sector. The maternal mortality ratio appears to have fallen somewhat in recent years, but at 392 maternal deaths per 100,000 according to the 2000 BDHS, it remains one of the highest outside of sub-Saharan Africa.

1.31 Further, new health challenges are emerging for the public health delivery system. A public health response to the nationwide contamination of tube-wells with arsenic is urgently needed to prevent serious long-term consequences of large-scale poisoning. Similarly, though HIV prevalence rates are low, factors that have led to HIV epidemics in other countries are present in Bangladesh, and urgent action is needed to prevent a major outbreak. Finally, it is important to note that, notwithstanding trends in improvement in aggregate mortality and morbidity indicators in Bangladesh, access to effective health care by certain group of the population continues to pose significant challenges. For instance, children in poor households continue to have considerably greater risk of mortality compared to those in richer households.¹³ Similarly, as examined in more detail in chapter 3, factors such as income, lack of access to safe water, sanitation and health facilities, mother's education, and poor feeding practices help explain considerable variation in child nutrition indicators across different population groups.

Literacy and School Enrollments:

1.32 ***Progress in increasing literacy and school enrollments during the nineties has been less encouraging.*** While a definitive assessment of the rise in literacy rates during the 1990s in Bangladesh will have to await release of the 2001 Population Census literacy estimates, results from the 2000 HIES (Table 1.6) suggest the rise in literacy during the nineties has been considerably higher than in the previous decade.¹⁴ Even so, only 45 percent of the population 7 years and older is literate, a proportion that would place Bangladesh in the unenviable position of near-parity with Pakistan, and considerably behind both West Bengal (69 percent) and India as a whole (65 percent).¹⁵

¹³ *Fighting Poverty: Bangladesh Human Development Report 2000*. Bangladesh Institute of Development Studies.

¹⁴ According to the population censuses conducted in 1981 and 1991, literacy rates for the population aged 7 years and older rose from 26 percent to 32 percent.

¹⁵ Comparable figures for Pakistan are not available, but according to the 1999 Pakistan Integrated Household Survey, 42.5 percent of the adult population aged 15 years and older was literate. Literacy rates for West Bengal and India are from the 2001 Population Census of India.

Table 1.6: Literacy Rates in Bangladesh

	Population 7 years and Older		
	National	Rural	Urban
Both Sexes:			
2000 HIES	44.9	40.9	60.2
1991 Census	32.4	27.9	49.8
Change:	12.5	13.0	10.4
Male:			
2000 HIES	49.5	45.5	64.9
1991 Census	38.9	34.4	56.3
Change:	10.6	11.1	8.6
Female:			
2000 HIES	40.1	36.1	55.3
1991 Census	25.5	21.5	41.8
Change:	14.6	14.6	14.5

Source: 1991 Population Census Results (BBS web-site) & 2000 HIES Preliminary Report

1.33 To make a significant dent in illiteracy, further increases are needed in the proportion of children enrolled in school. However, the 2000 HES estimates show little or no improvement in enrollments compared to 1995-96: one-quarter of the age-group 6-10 years, and one-third of those 11-15 years old are currently not enrolled in schools (Table 1.7).¹⁶

Table 1.7: Percentage of Children Currently Enrolled in School

	% Children aged 6-10 years			% Children aged 11-15 years		
	National	Rural	Urban	National	Rural	Urban
Both Sexes:						
2000 HIES	75.1	75.0	76.2	65.3	64.9	66.7
1995-96 HES	80.1	80.0	80.5	63.7	63.0	67.3
Change:	-5.0	-5.0	-4.3	+1.6	+1.9	-0.6
Male:						
2000 HIES	74.0	73.9	74.9	59.4	58.4	63.6
1995-96 HES	80.5	80.2	81.3	61.6	60.6	66.7
Change:	-6.5	-6.3	-6.4	-2.2	-2.2	-3.1
Female:						
2000 HIES	76.4	76.1	77.5	71.5	72.0	69.7
1995-96 HES	79.7	79.7	79.8	66.2	65.8	67.9
Change:	-3.3	-3.6	-2.3	+5.3	+6.2	-1.8

Source: 1995-96 HES Summary Report & 2000 HIES Preliminary Report

1.34 The failure of the surveys to pick up any rise in enrollment in the country presents something of a puzzle since government records indicate that the number of primary schools in Bangladesh increased by more than 63 percent, from 47,000 in 1990 to 77,000 in 2000. While the increase occurred mostly outside the public sector, government schools account for about 70 percent of total primary enrollment. In contrast to the HES numbers, Primary and Mass Education Division (PMED) statistics indicate that primary school enrollment increased by 47 percent, from 12 million in 1990 to more than 17.5 million in 2000, and gross enrollment in 2000 was 96 percent.

1.35 ***The quality of education provided remains a serious concern.*** A 1999 Education Watch study that assessed basic competencies through testing children aged 11-12 years found that fewer

¹⁶ A household survey conducted for the 1999 Education Watch study, covering 42,500 households throughout the country, also reported that 23 percent of the children aged 6-10 years were currently not enrolled in school, data which suggests that the HES results are unlikely to be far off the mark. On the other hand, the 2001 Education Watch study reports a net enrollment rate of 80 percent, i.e. about 5 percentage points higher than the 2000 HIES.

than one-third finish primary-school with some meaningful learning. Rural children lag behind their urban counterparts by one academic year, and gender and strata differences in learning persist. Despite the increase in funding available for primary education over the past two decades, governance problems continue to plague the system. For instance, although textbooks are supposed to be supplied free of cost to primary students, the Education Watch study found that three months into the school year, one in ten children had not received their allotted books, indicating that the problem of delayed distribution needs priority attention.

1.36 ***Significant progress has been achieved in improving gender equity in education.*** Notwithstanding problems of enrollment and quality, according to BANBEIS records as well as survey-based estimates from the latest HES and Education Watch household surveys, the gender gap in enrollment at the primary and secondary level has been virtually eliminated. This is particularly heartening news given that significant disparities continue to persist elsewhere in the region – in India, Pakistan, and Nepal.

Vulnerability, Natural Disasters, and Personal Security:

1.37 On account of locational and climactic factors, Bangladesh is among the most disaster-prone countries in the world. During its relatively short history, it has been subject to a number of shocks such as floods, cyclones, river bank erosion, and droughts. Apart from such covariant risks, poor people in Bangladesh are also vulnerable to such idiosyncratic shocks as ill health, economic shocks, and violence.

1.38 ***Over the course of the nineties, there has been progress in reducing vulnerability on several fronts, especially related to enhancing food security.*** Since the 1974 famine, Bangladesh has been successful in averting further famines. This is a testament to achievements on several fronts: freeing of import restrictions on irrigation equipment, a measure that boosted agricultural production; development of rural infrastructure; reforms to the public food distribution system and safety-net programs; and consolidation of the micro-credit network over the nineties (Rahman, 2000).

1.39 ***Disaster-coping mechanisms are also much stronger,*** as evidenced by the reduced impact of the 1998 floods relative to previous natural disasters. The 1998 flood that inundated over two-thirds of the country, leading to widespread crop loss and displacement in affected areas, was unprecedented in its duration, especially in the central part of Bangladesh. Despite the scale of damage, this was the first major flood after which agricultural output increased, food prices remained stable (albeit slightly higher), no major shortages of food items were reported at any time, and households were by and large able to maintain consumption levels. Several factors were at play: household food security was strengthened as a result of rapid and massive scaling-up of government and donor-supported food transfer programs;¹⁷ of large private sector rice and wheat imports, aided by government policy;¹⁸ of improved transport infrastructure that enabled distribution of relief supplies to flood-affected areas; and of credit provided by NGOs to flood-affected households.

¹⁷Del Ninno and Dorosh (1999) report evidence that food transfers through the Vulnerable Group Feeding and Gratuitous Relief programs were fairly well-targeted to poor households.

¹⁸Dorosh (1999) argues that it was largely private sector imports, rather than government interventions in the markets for food grains, that kept rice prices at import parity and buttressed food supply in the months following the floods. Private sector imports were encouraged by government policies (e.g., removal of import tariffs, limitations on open market sales, expedited clearance through customs, etc.) introduced as part of the trade liberalization of the late 1980s and early 1990s. Food aid also played an important role, not so much by augmenting supplies, but by providing purchasing power to poor households who had lost the capability to acquire sufficient food.

1.40 ***There is evidence of reduced vulnerability in coping with fluctuations in food prices.*** Since poor households spend a large part of their income on food, even small price increases can severely affect food intake. Data from the 2000 HES show that while there is some seasonal variation in prices of rice and wheat, there is no evident September-November peak, traditionally thought to be one of the lean seasons. Moreover, rice consumption appears to be stable throughout the year, with no significant temporal variation, even for the poorest households (Background Paper 5).

1.41 ***These are impressive achievements, but tremendous challenges remain.*** Even with the 1998 flood when a major food security disaster was averted, repercussions were far-reaching, since households lost or sold their productive assets, forcing a long-term cost for short-term benefits (del Ninno et. al., 2001). Inadequate risk coping mechanisms still compromise nutrition in poor households, particularly among children. A study of child nutrition status shows that wasting – an indicator of recent or current under nutrition – is still highly seasonal, tending to peak in June-August of each year (Helen Keller International, 2001). While food security has certainly improved for much of the population, there are groups such as children, distressed female-headed households, and the elderly, for whom current household mechanisms for dealing with such risk are far from sufficient.

1.42 Other types of deprivation and vulnerability stem from the inability of poor people to influence decisions that affect their lives. This may be manifest in the ineffectiveness of state institutions for the poor, compounded by a feeling that redress is not possible.¹⁹ Domestic violence and crime and an overall sense of insecurity are also growing concerns. Deteriorating law and order is a concern cited not just by the poor: A Power and Participation Research Center (PPRC) perception survey on Dhaka citizens identified insecurity as the foremost worry voiced by nearly ninety per cent of the population (Rahman and Islam, 2001).

1.5: PROFILE OF THE POOR:

1.43 A profile of poverty constructed using the 2000 HIES data reveals that poor households in Bangladesh do not look much different from the poor in other parts of South Asia. They tend to have low levels of education and limited access to land and to be highly concentrated in low-paying, physically demanding, and socially unattractive occupations. In both urban and rural areas, the poor have less access to modern amenities and services and also commonly reside in houses of inferior quality. However, unlike other parts of South Asia, poverty in Bangladesh does not appear to be strongly linked (at least in the aggregate) with social identity or religion: the incidence of poverty is more or less the same among the muslim (50 percent) and non-muslim (46 percent) population. Likewise, poverty rates are virtually identical for male and female-headed households (50 percent vs. 48 percent respectively). Among female-headed households, however, those that are widowed, divorced or separated (about 60 percent of all female-headed households) have a considerably higher incidence of poverty (56 percent) relative to others.

1.44 **Education** is a key dimension of welfare in Bangladesh (Table 1.8). Close to three-quarters of the poor population lives in households where the head is illiterate. The incidence of poverty declines as household heads are progressively more educated, such that the incidence of poverty falls by half in urban households whose heads completed primary school and by almost one-third in similar rural households as compared to those headed by illiterates.

Table 1.8: Poverty Incidence by Level of Education of Household Head

¹⁹ Nabi et al 2002 in *Voices of the Poor: From Many Lands*.

Highest educational Attainment of Head	Incidence of Poverty			Percentage of:	
	Urban	Rural	Overall	Population	Poor
Not literate	64.2	64.0	64.1	57	73
Less than Primary	40.6	41.5	41.3	5	4
Completed Primary	31.1	43.6	40.9	15	12
Completed Middle	22.4	34.1	30.7	9	6
Completed Secondary	12.5	29.0	24.0	6	3
Completed Higher level	2.8	13.2	8.2	7	1
Overall	36.6	53.0	49.8	100%	100%

Source: 2000 HIES

1.45 Poverty and Occupational status: Involvement in casual wage labor is also a very strong correlate of poverty in Bangladesh (Table 1.9). In both urban and rural areas, the incidence of poverty is considerably higher (67 and 75 percent respectively) where the head of household works as a casual wage laborer. Close to half the total number of poor in rural areas and more than one-third in urban areas reside in households where the main occupation of the head is casual wage employment. Of-course, the relationship between poverty and occupation is more complex than that indicated here. Not only do different household members (i.e. other than the head alone) carry out different types of work, but also the same individuals themselves engage in multiple and diverse activities over the course of the year. The relationship between poverty and different sources of income of the household is explored in more detail in Chapter 2.

Table 1.9: Poverty Incidence by Occupation of Household Head

Occupation of Household head	Rural Areas			Urban Areas		
	Poverty incidence	Percentage of: Popl'n Poor		Poverty incidence	Percentage of: Popl'n Poor	
Casual wage employment	74.9	33	46	66.9	20	36
Salaried employment	35.1	9	6	24.1	30	20
Self employed - non-agriculture	44.6	18	15	32.2	32	28
Self employed – agriculture	43.3	31	25	47.9	5	7
Unemployed / not working	42.9	10	8	25.9	13	9
Overall	53.0	100%	100%	36.6	100%	100%

Source: 2000 HIES

1.46 Poverty and access to land: Poor households typically own less land than the non-poor (Table 1.10), and are highly represented among the functionally landless (i.e. those owning less than 0.05 acres). Moreover, variation in land quality is of particular importance as access to irrigation is far from universal. Therefore, while the incidence of poverty is clearly the highest among the landless and marginal land owners, there remains about 22 percent of the population at risk of poverty even in the largest landowning category.

Table 1.10: Rural Poverty Incidence by Land Ownership

Amt. Of Land owned	Poverty Incidence	Percentage of:		
		Population	Poor	Non-Poor
Less than 0.05 acres	64.7	48	59	36
0.05-0.49 acres	59.4	13	15	11
0.50-1.49 acres	47.6	17	16	20
1.50-2.49 acres	35.7	9	6	13
2.5 + acres	21.8	12	5	21
Overall	53.0	100%	100%	100%

Source: 2000 HIES

1.47 **Housing conditions** for the poor in Bangladesh are also generally worse than for the rest of the population and in rural as compared to urban areas (Table 1.11). While 7 percent of overall population has access to tapped water supplies in Bangladesh, only 2 percent of the poor had access to this drinking water source. The vast majority of the rural population relies on tube-wells for drinking water supply. Only 38 percent of the poor lived in dwellings with proper toilet facilities compared to 71 percent of the non-poor. Poorer access to drinking water supply and sanitation in turn make it more likely that the poor suffer from worse health than the non-poor. Somewhat surprisingly, the 2000 HIES data do not show any difference in propensity to be sick across poor and non-poor households, though this in turn could be because less wealthy households are less likely to report illnesses. Objective anthropometric measures of health status derived from the HIES data show clear differences in children's health outcomes across income levels (Chapter 3). Access to services and amenities such as electricity and phones is much lower among the poor compared to the non-poor, as well as among rural residents compared to those in urban areas.

Table 1.11: Housing Conditions by Sector and Poverty

Housing Characteristic	Amongst the Population			Amongst the:	
	Urban	Rural	Overall	Non-Poor	Poor
Average number of rooms in dwelling:	2.4	2.3	2.4	2.8	1.9
Average size of dwelling (sq. feet):*	419	364	375	462	287
Population with supply water for drinking	32%	0.3%	7%	11%	2%
Population in dwelling with hard roof:**	93%	78%	81%	90%	72%
Population with proper toilet facilities:***	83%	47%	55%	71%	38%
Population living in electrified dwelling:	81%	20%	33%	48%	17%
Population living in dwelling with telephone:	8%	0.3%	2%	3%	<0.1%

Notes: * Excluding bottom and top one percent of the population. ** i.e. cement, corrugated iron sheets, wood, tiles, etc.
*** i.e. excluding those using temporary latrines or open fields. Source: 2000 HIES

KEY FINDINGS AND CONCLUSIONS	POLICY IMPLICATIONS
<p>Labor Employment and Earnings Labor force trends show growth of formal private sector employment and decline in the share of unpaid family labor, as well as increased participation by women. Among lagging groups are (a) women, who are more likely not to participate in the labor force, or be under-employed, and (b) urban, well educated but unemployed young men. Significant wage premiums attach to education, to non-farm employment, and to public sector employment.</p>	<p>Wage analysis reveals that complementary actions on several fronts – education, physical and financial infrastructure – will help to improve the returns to labor, reduce the incidence of under-employment, and draw women increasingly into the labor force.</p> <p>Measures are needed to better align public sector wages with market wages in the private sector, particularly among lower-level govt. functionaries.</p>
<p>Land and Common Property Resources Significant disparities in land ownership separate the poor and non-poor, with tenancy a main route for the poor to access land. Common property resources are an important source of livelihood for the poor, but access to them is also increasingly a source of conflict. Promoting agricultural growth by improving land productivity will affect the poor mainly via its impact on food prices, agricultural wages, and linkages with the non-farm sector.</p>	<p>Better defined property rights for land and regulations on common resource management are needed to raise returns on these assets and promote equitable access. Overall policy focus should be on measures to foster change in three areas: improving productivity of existing crops, diversifying crop production, and expanding non-crop agriculture.</p>
<p>Access to Credit NGOs have pioneered innovative mechanisms to deliver credit to the poor, leading to a dramatic increase in the importance of the semi-formal financial sector as a source of such credit. By contrast, the formal financial sector remains effectively on the sidelines, delivering its services mainly to the non-poor. Small landowning entrepreneurs, currently excluded from both micro-credit and the formal sector, fall between two stools.</p>	<p>Continued public support for micro-credit programs is justified. The formal financial sector is in need of substantial improvements, beginning with improvements in governance, discipline, and the legal framework. The government and MFIs must find ways to mobilize rural savings and to reach borrowers who are currently ineligible for micro-credit but who, at the same time, also lack access to formal credit.</p>
<p>Economic Environment and Public Assets Prudent macro-economic management and trade liberalization have yielded benefits – low inflation, faster agricultural growth, smaller fluctuations in food prices, increasing employment and productivity of export sectors. However, GOB's fiscal position deteriorated considerably in late 1990s (with some improvement in FY02), and a substantial anti-export bias remains. Access to infrastructure is important to the development of both modern agriculture and a robust non-farm sector and for poverty reduction. Communities with better access have higher incomes, greater marketed surplus even for small farmers, and better developed non-farm sectors and credit markets.</p>	<p>Continued consolidation of GOB's fiscal position and curbing the hemorrhage from the SOE sector is a policy imperative. Completing trade reform by removing the anti-export bias will help the country realize further gains.</p> <p>Upgrading physical infrastructure – electricity, roads, inland waterways, and ports – and correcting geographical imbalances is a priority concern.</p>

2. ACCELERATING GROWTH: THE ROLE OF KEY PRIVATE AND PUBLIC ASSETS

2.1 With half of Bangladesh's population living below the official poverty line, the scope for direct government action against poverty through transfers to the poor or other direct welfare programs is limited. This is especially true, given that the government collects one of the lowest levels of tax revenues in the world (under 10 percent of GDP in FY01). The main impetus for poverty reduction, therefore, must come from higher growth.

2.2 Looking ahead, given the relationship between growth, inequality, and poverty reduction during the 1990s, it is possible to extrapolate the growth rates necessary to reach future poverty reduction targets. Simple simulations based on the net elasticity of poverty to growth calculated from the HES data suggest that even with an average growth rate of 6 percent per annum – faster than at any other period in Bangladesh's history – the country would barely succeed in halving the incidence of poverty by 2015 (see Appendix Figure 2.1 and Background Paper 2).¹ Moreover, analysis of the relative importance of growth and inequality in poverty reduction shows that worsening income distribution during the 1990s reduced the extent of poverty reduction.² Had the observed rate of growth during this period been distribution-neutral, poverty would have fallen by 17 percentage points, or almost twice the actual observed rate (Background paper 2).

2.3 The implication of this analysis is that as respectable as Bangladesh's economic growth has been, it will have to be raised to at least 6 percent per year on a sustained basis to achieve poverty reduction objectives. GOB's recently announced antipoverty strategy, which lists pro-poor economic growth as its first pillar, recognizes clearly that if the pattern of growth can be made more pro-poor, Bangladesh will get a greater poverty reduction impact from the expansion it achieves (GOB 2002).

2.4 Devising strategies to accelerate pro-poor growth requires knowledge of the main activities and sectors from which poor people derive their livelihood, both to help them build key assets needed to raise their incomes as well as to provide the enabling environment to help raise returns to these assets. The section 2.1 profile of the main sources of income and assets of Bangladeshi households using data from the 2000 HIES shows labor to be the main asset and income source for poor households. Section 2.2 presents a more detailed profile of labor employment and earnings and examines factors underlying differences in returns to wage labor in the work force. Section 2.3 discusses how best to increase returns to land and common property resources, while section 2.4 examines policies to improve access to credit to facilitate the accumulation of productive assets by poor households. Finally, section 2.5 concludes with a discussion of complementary public assets and overall environment needed to help raise returns to private assets. Policies and actions to help build and enhance the quality of human capital – the single-most important asset from the standpoint of the poor – are taken up in more detail in Chapter 3.

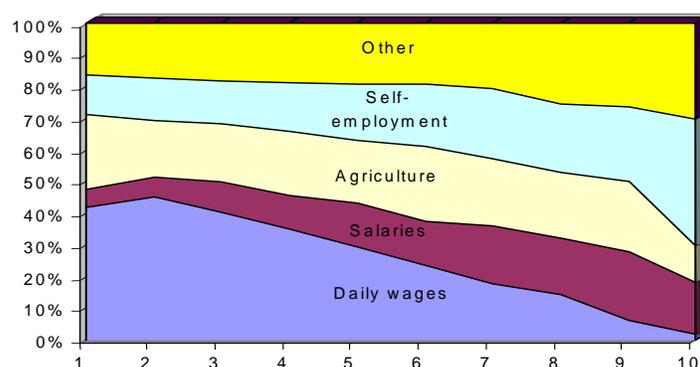
¹ The elasticity estimates are presented in Appendix Table 2.1. An important caveat to bear in mind is that these projections assume a constant elasticity over time, a somewhat unrealistic assumption given that the elasticity is likely to fall as the rate of poverty comes down from its currently high level. This in turn means that Bangladesh may need even more than an average 6 percent per annum growth rate to halve poverty by 2015. See also IMF 2002 "Growth Requirements for Poverty Reduction in Bangladesh".

² In order to separate the effects of growth from inequality, changes in poverty can be decomposed into growth and redistribution components, where the former measures the effect of the change in mean income at a given income distribution and the latter indicates the effect of the change in income distribution at a given mean income.

2.1: PROFILE OF SOURCES OF INCOME AND ASSET PORTFOLIOS:

2.5 **Sources of Income:** Comparing sources of income across the income distribution shows that households in Bangladesh pursue a broad range of activities to earn their livelihoods (Figure 2.1). Even within any single income decile, not only do earning strategies vary extensively across households, but even in the same household, different members engage in various different activities over time and across seasons.³ Clear differences in the importance of alternative income generation strategies also mark the behavior of rich and poor. The starkest difference is in the tremendously high reliance on daily wage labor among the lower income groups and by contrast, the negligible share that such work contributes to income among the relatively better-off.

Figure 2.1. High Dependence of the Poor on Daily Wage Income



2.6 For the poorest-fifth of the population, daily wage income and salaries account for close to half of total income. Agricultural income also provides a greater share of income for the poorer groups. Differences in the relative importance of each income source for the rich versus the poor can be encapsulated in the Gini income elasticity (GIE). The GIE decomposition shows the contribution of each source of income to overall income inequality.⁴ As shown in Table 2.1, daily wage labor income contributes more to reducing income inequality than any other income source. Agricultural income also has a similar effect.

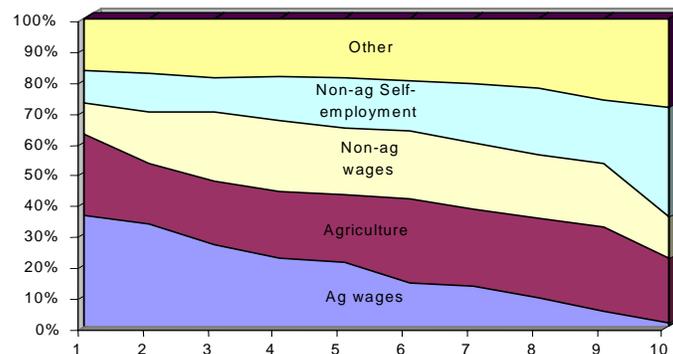
Table 2.1. Gini Decomposition by Source of Income

	Income share	Gini income elasticity
Daily wage labor income	0.145	-0.218
Salaried employment income	0.162	1.247
Non agricultural income	0.271	1.448
Agricultural income	0.169	0.717
Other sources of income	0.251	1.264
Total per capita income	1.000	-

Source: 2000 HIES

³ The 2000 HIES is the first survey by BBS that contains extensive modules on total earnings from different income sources as well as the main assets owned by households. Total income earned has been classified into income from daily wage work, salaried employment, agriculture (including fisheries and livestock), non-farm self-employment activities, and “other” income (remittances, rental of property, investments, etc.). 54 percent of households get income from more than one source, defined broadly as agricultural wages, non-farm wages, family business, and agricultural self-employment. Among households for whom agricultural or non-farm wage labor is the main source of income, about 40 percent also derive some income from non-wage agriculture.

⁴ The GIE of each income component is defined as the impact of an increase of one taka, distributed as a constant percentage change in the distribution of income from that particular component, on overall income inequality. If the GIE of a particular component equals one, a marginal increase in income from that source will not affect the overall income Gini, while an elasticity less than one indicates that an increase in income from that source will decrease the overall Gini.

Figure 2.2. Agricultural versus Non-Farm Sources of Income, Rural Areas

2.7 Another noteworthy feature in the income profile is the importance of the non-farm sector (all economic activities except agriculture, livestock, fishing, and hunting) as a source of income for households in Bangladesh, including in rural areas and for the poorest income groups. The share of income derived from agriculture declines steadily with income. However, even for the poorest 10 percent of the population in rural areas, about 40 percent of income is derived from non-agricultural sources, either as wages earned in the non-farm sector, family business income, or remittances and other income (Figure 2.2).

2.8 Remittances are an important source of employment and income in Bangladesh. An estimated 3 million workers of Bangladeshi origin work overseas,⁵ with the annual average outflow of migrants averaging about 210,000 per annum (Background Paper 8). Data from the 2000 Labor Force Survey shows that out of the 26.3 million households in Bangladesh, around 0.4 million (1.5 percent) received remittances as the main income source, with the number rising to 0.9 million (4 percent) if one were to also include those who receive remittances as a complementary income. Even amongst the latter group, remittances constituted an important source of income support and investment, accounting for about 35 percent of total annual household income.⁶ Aggregate workers' remittances account for a sizeable share of foreign exchange inflows to Bangladesh, and in recent years have averaged the equivalent of about 30 percent of total export earnings. In FY01, data from Bangladesh Bank shows that official remittance inflows amounted to almost US\$1.9 billion, a figure that is likely to underestimate total inflows given the widespread use of informal transfer channels by overseas Bangladeshi workers.

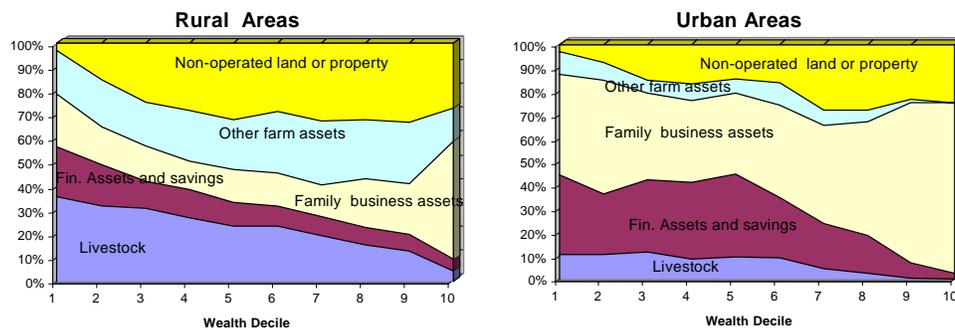
2.9 **Asset Portfolios:** Differences in income levels in Bangladesh in turn reflect severe disparities in asset endowments across households. 2000 HIES data indicate that the distribution of the taka value of various personal (e.g. consumer durables), financial (savings, investments, etc.) and productive assets (agricultural land and implements, business assets etc.) has an overall Gini of 0.7, far higher than either per capita incomes (Gini 0.4) or per capita expenditures (Gini 0.3). Regardless of the type of physical or financial asset, poorer households invariably tend to own less of it than the more affluent. Not only do the poor own less, they also have substantially different asset portfolios from richer households. In particular, poorer households hold a greater share of their asset

⁵ This figure may be an underestimate in so far as it does not include many migrants who work illegally in other countries.

⁶ Average remittances for such households (i.e. those for whom remittances are the main or complementary income source) amounted to Tk. 48,302 per annum. It is worth noting that this amount would be sufficient to place even a 6-person household above the poverty line. For more information on Bangladeshi workers abroad, please see Background Paper 8.

endowments in relatively more liquid form such as livestock and financial assets (Figure 2.3).⁷ The poor are much less likely to own business assets. These differences in portfolios reflect not only differences in access to investment opportunities (e.g., due to credit constraints), but also the compulsion on poor households to seek safer but lower-returns, to refrain from profitable but non-divisible investments, and to rely on costly strategies for smoothing consumption (e.g., through distress sales of liquid productive assets).

Figure 2.3. Composition of Assets: Importance of livestock & financial assets for the Poor



2.10 The varied range of income generation strategies and asset holdings has several implications for designing an effective poverty reduction strategy. First, it emphasizes that no silver bullet will cut poverty. Rather, development interventions need to take different contexts and classes of households into account at the same time that they bolster an environment that opens opportunities to the poor and lets them turn their own specific endowments and circumstances to advantage. Secondly, it is precisely because of this heterogeneity in the context of asymmetric information between households and the government that decentralization and participation – which enable people to reveal their demands for intervention and hence shape the development process – are important. And finally, heterogeneity illustrates why growth in itself may not assure poverty reduction. Growth will always be a precondition for the elimination of poverty, but policymakers need to also take into account the nature of growth and the variegated potential of households and individuals to participate in and benefit from an expanding economy.

2.11 The sections that follow discuss key assets – labor, physical assets, financial assets, and common property resources – from the standpoint of the poor. Each section presents key features of the distributions of asset ownership and returns and examines the main public policies and actions that can help asset accumulation. Finally, section 2.5 takes up a discussion of the requisite enabling conditions to help increase the rate of return on these assets and accelerate growth.

2.2: LABOR EMPLOYMENT AND EARNINGS:

2.12 As noted above, labor, particularly among the poor, is the most important and abundant household asset. Trends in employment and wages, therefore, have an important bearing on the pace of poverty reduction. In which sectors are the poor most likely to work? What is the relationship between poverty and unemployment? What are the main determinants of wages in Bangladesh? This section uses data from recent labor force (LFS) and household expenditure surveys to address such questions.⁸

⁷ The figure excludes owner occupied housing and agricultural land, which are by far the most important assets for households across the wealth distribution.

⁸ A more detailed discussion of labor markets in Bangladesh is available in Background papers 4 and 8.

Table 2.2. Trends in the Labor Market, 1991-2000

	1990-91	1995-96	1999-00
Labor Force Participation Rates (%):			
Extended definition	70	65	66
Usual definition	49	48	49
Employment Status -- % employed persons in: *			
Self-employed	27	29	32
Employee	12	12	13
Day laborers	14	18	18
Unpaid family helpers	47	40	37
Other	1	--	--
Sector of Employment -- % employed persons in:**			
Formal, Public	..	4.2	4.5
Formal, Private	..	8.8	14.4
Informal	..	87.0	81.1

Source: Various LFS reports. Notes: * Extended definition of the labor force, 10 years or older.

** Extended definition, labor force 15 years and older. -- indicates less than 1%

Labor Force Participation Rates and Sectors of Employment:

2.13 Consistent with improvements in living standards during the nineties, trends in the labor force show the formal private sector growing as a source of employment. During the nineties, the Bangladeshi labor force has grown by about 1.9 percent per year, increasing at an average annual rate of about 1 million from 51 million people in 1990-91 to 60 million people in 1999-00.⁹ In 1999-00, the vast majority (81 percent) was engaged in non-formal activities (Table 2.2). Numbers of formal private enterprise and public jobs have been rising in importance, accounting for 13 percent of the labor force in 1995-96 and rising to 19 percent of employment and 24 percent of total hours worked by 1999-00. Since the public sector share has remained stable at roughly 4-5 percent of the employed population 15 years and older, hiring by private firms has produced most of the growth in formal sector employment.

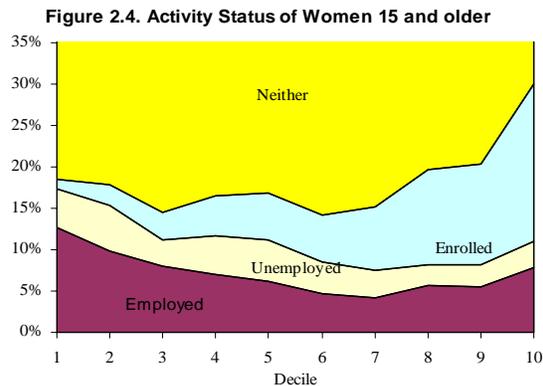
2.14 Agriculture is the main employer, but the non-farm sector is also an important source of work in rural areas for both men and women. According to the 1999-00 LFS data, 50 percent of the employed population works in the non-agricultural sectors. In rural areas, agriculture remains the primary source of employment for men (61 percent) and women (56 percent).¹⁰ Non-farm activities (mainly manufacturing, trade, transport, and community services), while the main source of jobs for about 40 percent of the rural labor force, also provide secondary employment for both men and women and, according to the 2000 HIES data, equally so for the poor and non-poor in rural areas. The non-farm sector, it seems, has been rising in importance, a trend reflected by the increased return to certain key non-farm occupations (Background Paper 3). Preliminary analysis of the HIES data indicates that the share of income derived from the non-farm sector varies considerably across different geographic regions (World Bank 2002e), suggesting that a better understanding of regional constraints to growth of this sector could play an important role in developing a regionally differentiated strategy for poverty reduction.

⁹ These numbers pertain to the economically active population 10 years and older, according to the extended definition that includes in the economically active population any person above a certain age who was either employed for pay or profit, or unemployed (seeking/available for work) during the reference period. It includes household economic activities such as care of poultry and livestock, threshing, preservation and processing of food etc. The 'usual definition' of economically active excludes own household activities.

¹⁰ If the extended definition is used to measure labor force participation (i.e., if household activities such as care of livestock are also included), the importance of agriculture as the primary source of employment increases considerably.

2.15 Participation by women in the labor force has increased during the decade. Female labor force participation and sector of employment are strongly linked to income levels.

The LFS “extended definition” that shows labor force participation rates for women falling from 58 percent in 1990-91 to 52 percent in 1999-00 is somewhat misleading. The definition classifies almost three-quarters of women in the labor force as working as “unpaid family helpers” (Appendix Table A2.2). Based on the “usual definition” – which excludes own household activities – labor force participation rates of women have increased steadily from 14 percent in 1990-91 to 18 percent in 1995-96 and 23 percent in 1999-00. 2000 HIES data show that participation rates among women vary considerably across per capita expenditure deciles (Figure 2.4). The rates are relatively higher in both the richest and poorest deciles, though the women tend to be employed in very different types of activities. The majority in the poorest decile work for wages in agriculture or in manufacturing or on family enterprises. By contrast, over 85 percent of women in the richest decile hold white-collar jobs, predominantly as teachers or health care workers.



2.16 This finding comports with female education patterns. Completed schooling of all working women taken together is lower on average than for their non-working counterparts (2.2 vs. 2.8 years). Yet, educational attainment of women in white-collar jobs is considerably higher (6.6 years). This apparent “wealth effect” of women from better-off households spending less time in the labor force goes together with a “substitution effect” that shows highly educated (largely urban) women being more likely to work.

2.17 A noteworthy development for women has been the boom in the textile and apparel industries over the last decade. This sector, in which 85-90 percent of the employees are women, has provided jobs for over one million of them. About 18 percent of employed women work in the manufacturing sector, with more than half of them employed in the clothing and textiles industries, as compared to about 30 percent of the male manufacturing sector workforce (Appendix Table A2.3). Garment industry jobs that tend to be concentrated in areas around Dhaka and Chittagong have attracted many migrant workers from rural areas, often from relatively poorer households (Hewett and Amin, 2000). For such women, factory work has meant not only better pay, more status and more responsibility relative to other work available in their home towns but also a sense of pride and empowerment at being able to provide for their families (Kabeer, 2001). In part because of the opportunities afforded by this sector, working women in urban areas are also much more likely to be salaried employees (38 percent) rather than day laborers or unpaid family helpers, as compared to rural areas, where only 10 percent of working women are salaried.

2.18 The wage differential between agriculture and other sectors in Bangladesh widened during the nineties. The question of how much real wages actually increased over this period depends crucially on the rate assumed for inflation. Analysis of wage data compiled by BBS indicates that the gap in wages received by unskilled industrial or agricultural workers has increased: with industrial workers receiving 1.7 times the daily wage rate of agricultural workers in 1997 as compared to 1.4 times in 1990 (Background Paper 8). The composition of employment has also shifted toward the services sector – the main source of employment growth (4.2 percent per year)

during the nineties. The question of what has been happening to wages in Bangladesh during the past two decades necessitates deflating wage data over time from nominal to real terms, which in turn requires the choice of a suitable price index for this purpose. In the case of Bangladesh, however, this issue is complicated by the fact that different available price indices do not give the same picture of inflation. For example, depending on the index used, one can either conclude that between 1992 and 2000, agricultural wages declined by around 6 percent or increased by 9 percent (Background Paper 8). However, with the exception of agriculture (where the conclusion depends on the particular index used), wage analysis suggests that real wages have increased in all sectors since 1980. Since the beginning of the nineties, the strongest growth has been registered by real wages paid by the small and cottage industries, followed by the real wages paid to unskilled manufacturing workers.¹¹

Unemployment and Under-employment:

2.19 ***Visible or open unemployment rates are not very high in Bangladesh, but under-employment is a concern, especially among women.*** Although unemployment has increased slightly during the 1990s, remaining low at 3.7 percent (Table 2.3), the rate is a misleading indicator of the degree of slack in the Bangladeshi labor market. If individuals employed as unpaid family helpers and working fewer than 15 hours per week are also treated as unemployed (“proposed” unemployment rate), the percentage rises to 11 percent. The perception of the labor market changes radically if under-employment (share of employed persons working less than 35 hours during the reference week) rates are examined. In 1999-00, 35 percent of the labor force was under-employed, even though the trend has been downward since the beginning of the nineties. Under-employment is high in the agricultural sector (46 percent), and is particularly acute among women (72 percent). This is likely to reflect a combination of factors – including fewer opportunities in professions that offer full-time employment, as well as a greater burden of household chores and child-care activities that lower women’s propensity to seek full-time jobs.

Table 2.3. Unemployment and Under-employment

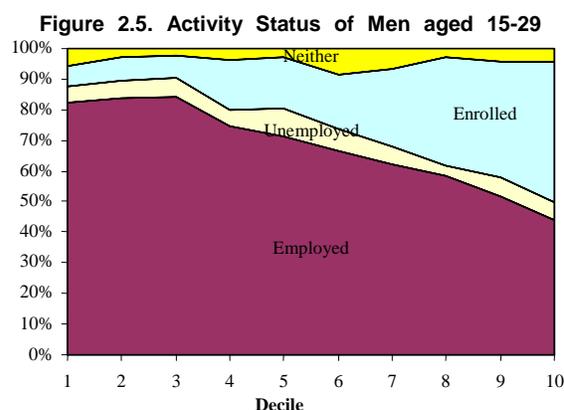
	1990-91	1995-96	1999-00
Unemployment	1.9	2.5	3.7
Proposed Unemployment	18.3	16.5	11.0
Under-employment	43.0	34.6	35.3

Source: 2000 LFS. Extended definition of the labor force, population 10 years and older

2.20 ***Unemployment, while high among young males (age 15-29 years), particularly in urban areas, is evidently not linked to poverty.*** Though not a serious problem overall, unemployment tends to be concentrated among younger age groups, particularly those aged 15-29 years. It is more common among young urban males (9 percent) than rural ones (6 percent). The urban-rural disparity and the problem within this group is even more stark if activities (i.e., enrolled in school, employed or neither) are compared; the percentage of young men who are neither employed nor enrolled in school is 21 percent in urban areas compared to 12 percent in rural areas.

¹¹ The pros and cons of using different price indices, and the implication that this has for trends in real wages in different sectors, are discussed in more detail in Background Paper 8: *Performance of the Bangladeshi Labor Market During the Nineties*. Part of the reason for the discrepancy between the official CPI and inflation estimates from other sources may be because the weights for the CPI in Bangladesh have not been revised since 1985-86, and may hence be out-of-date in relation to current consumption patterns. Given the widespread use made of the CPI in Bangladesh (as in any other country), updating these weights merits serious consideration by BBS (Background Paper 1).

2.21 Figure 2.5 reveals that unemployment among young males is fairly steady across per-capita expenditure deciles, thus evidently not linked to poverty (either as cause or consequence). Indeed, the large observed decline in employment rates across deciles is due to the fact that young men from wealthier households tend to stay in school longer. Moreover, unemployed men have more education than their employed counterparts in the same age group; among 20-29-year old men, most of whom had already finished school, the unemployed had 7.4 years of completed schooling on average, compared to 5.0 years for all their contemporaries.¹² In sum, unemployed young men in Bangladesh are not particularly poor and certainly not lacking education, though they do tend to be concentrated in urban areas.

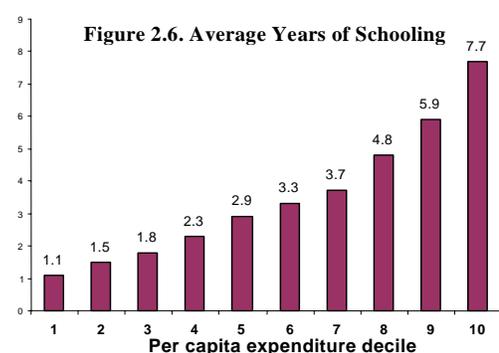


Determinants of Wages:

2.22 With labor the main asset of the poor in Bangladesh, prevailing wages have considerable bearing on their standards of living. From estimating separate regressions for employed men and women using 2000 HIES data, several noteworthy findings emerge about the main determinants of wages. Besides age, education, and urban/rural location, the multivariate analysis included controls for sector of employment, type of contract (daily wage or salary), and whether the employer was a government organization.¹³

2.23 ***For both men and women, labor markets offer significant returns to education.*** Even after controlling for observable individual and job characteristics, the analysis reveals substantial premiums associated with higher education (8 percent per year of schooling for women, 5 percent per year for men). Part of the reason women get higher returns to education could be due to the higher reservation wage of better educated women, who can afford to spend more time looking for better employment opportunities because their families can support them. In addition, since average schooling levels for women are lower, their marginal returns to education may be higher.

2.24 The 2000 HIES data show considerable disparities within the population in the highest educational attainment among the population aged 15 years and older ranked by per-capita expenditures (Figure 2.6). Individuals in the top decile have, on average, 7 times as many years of education as individuals from the lowest decile. This sharp gradient in educational attainment by income levels is one of the reasons why there is a large observed dispersion in wages, with the poor receiving on average much lower returns to their labor than other employed individuals. Investing in improving coverage and quality of education could have a high payoff, both for its intrinsic value as well as for its high instrumental value in raising incomes.



¹² These figures computed from the 2000 HIES are corroborated by the 2000 LFS data that show the unemployment rate of people with SSC/HSC education (10 percent) to be significantly higher than the average unemployment rate.

¹³ The regression results are reported in Appendix Table A2.4. Since not everyone in the labor force works for wages, the estimates control for selection bias in the wage regression.

2.25 ***Non-farm employment offers significant premiums relative to agricultural daily-wage work.*** Employment for men in manufacturing or other non-agricultural occupations provides a 25–34 percent premium compared to daily wage work in agriculture, even after controlling for differences in education and other individual and locational characteristics.¹⁴ Clearly, for those daily-wage workers fortunate enough to find such employment, the non-farm economy offers a promising route out of poverty. However, non-farm activity in rural Bangladesh embraces a wide and varied range of work and is marked by clear differences in the types of activities in which the poor and non-poor engage. The types of activities range from manufacturing jobs, white collar jobs (which include professional, administrative, clerical, sales, and service workers), and other wage-earning activities (mainly construction) to self-employment in non-agricultural enterprises. As one might expect, relatively better-off men have a greater propensity to be self-employed or to have a white-collar job, while the poor are more likely to work for wages in manufacturing, construction, or transportation.

2.26 ***Location has a significant effect on wages.*** Both male and female hourly wages are, on average, much lower in rural areas, at least in part reflecting the differences in cost-of-living between urban and rural areas and a strong metropolitan dominance effect, as well, on pay. In particular, distance from Dhaka has a very significant negative impact on wages (see Background paper 4). For each 100 km closer a community was to Dhaka, rural wages rise by an estimated 5 percent. These findings suggest that Dhaka (perhaps along with other large cities), rather than the smaller regional centers, plays a pivotal role in rural wage determination. Evidently, rural workers benefit from competitive demand for labor from urban-based manufacturing and white-collar employers.

2.27 ***Although daily-wage workers do not receive lower hourly wages, their total earnings are significantly below those of salaried workers.*** The regression results indicate that while men paid on a daily basis do not receive lower hourly wages than salaried workers, their comparative yearly earnings (hours worked as well as wages) come to about 14 percent less over the year on their principal job.¹⁵ Evidently, salaried jobs provide more hours per year, while daily-wage work – the main source of income for the poor – leaves the poor under-employed.¹⁶

2.28 ***Public sector jobs pay an extremely high wage premium.*** Even after controlling for individual characteristics such as education and experience (as proxied by age), the wage premium in public sector jobs for men is estimated to be 31 percent and for women 66 percent. Clearly, those who are fortunate enough to get government employment receive considerably higher wages than their otherwise observationally equivalent counterparts in the private sector. Assessing the types of jobs that the majority of public sector employees were doing, these wage premiums turn out to apply mainly to middle and lower level government functionaries, rather than to senior civil servants. Among men, 39 percent were clerical and related workers, 16 percent were service workers, and 12 percent teachers. Among women, nearly 80 percent were working as nurses and in jobs related to health, education, or as clerical workers. This suggests that the identified wage premiums are mainly with reference to middle and lower level government functionaries, rather than to senior civil servants.

2.29 Given this premium, considerable rationing of government jobs is to be expected. Also revealing is that the average government worker is 8 years *older* than his counterpart in other wage

¹⁴ It is worth noting, however, that while the wage regressions did control for selection bias in participation, they did not explicitly account for occupational choice decisions.

¹⁵ The log-wage regression controls for sector of employment—the vast majority of agricultural workers, for example, are paid on a daily basis.

¹⁶ These findings are consistent with the recent *Consultations with the Poor* study, where the most common perception of well-being expressed by the poor was to have employment opportunities throughout the year (Nabi and Chakrabarty 2000).

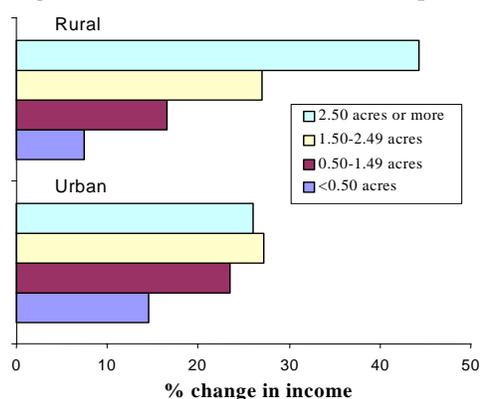
employment, and on-average has more than 6 additional years of schooling than non-government wage workers. It may be that men, particularly those in urban areas where such jobs are concentrated, wait several years for the chance at government employment, a delay justified by the reward of much higher-than-market wages. This job queuing may explain why unemployment among young educated men in Bangladesh is higher than in the population overall. It suggests that the government should take steps to better align public sector emoluments with prevailing market salaries for workers with comparable skills, so as to reduce any adverse incentives to lobby or queue for public sector jobs.

2.30 Policy Implications: The analysis of the employment patterns and determinants of labor market returns in Bangladesh has some important implications for designing a pro-poor growth strategy. First, the snapshot of broad employment patterns and trends shows that the main source of employment is the private sector, where formal activities have been growing in importance over the past decade. Following a strategy to accelerate private sector-led growth, particularly through small and medium enterprises that generate off-farm employment in rural areas, must be part of a pro-poor growth strategy. Second, as the analysis of determinants of wages in Bangladesh reveals, labor markets in the country offer significant returns to education. Investments in building and enhancing the quality of human capital, the subject of chapter 3, are thus likely to play a very important role in accelerating the pace of poverty reduction. Third, the analysis helps put into perspective the relatively limited role the government plays as a direct employer in the economy –fewer than 5 percent of workers are employed by the formal public sector in Bangladesh. But, despite its relatively small, direct role, the government’s indirect actions, such as its provision of complementary infrastructure and its influence on the overall investment climate, can have profound effects on labor markets through encouraging greater labor market participation and reducing under-employment. These indirect actions are discussed in more detail in section 2.5.

2.3: LAND AND COMMON PROPERTY RESOURCES:

2.31 Chapter 1 spelled out the strong negative association observed in Bangladesh between land ownership and poverty. Regression estimates based on the 2000 HIES data indicate that compared to a landless rural household, a household with less than half an acre has expenditures 7 percent higher, and a household with more than 2.5 acres – 44 percent higher per capita expenditures (Figure 2.7).¹⁷ Expenditure gains in urban areas also rise with the size of the landholding, but as expected, the rate of increase across different landowning categories is not as sharp. Above 1.5 acres, households have 27 percent higher PCE than the landless.

Figure 2.7. Gains from Land Ownership

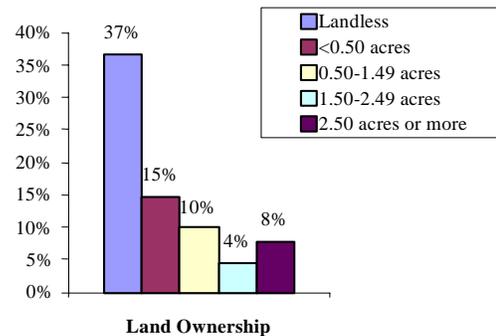


¹⁷ In order to ascertain the relationship between per capita expenditures and assets (both ownership of private assets and access to public assets), separate regression models were estimated for rural and urban areas using data from the 2000 HIES. The multivariate analysis included controls for household composition, religion, age, education, and sex of the household head, land ownership, ownership of non-agricultural business assets, access to natural assets (e.g., *beels*, *khas* land), and community infrastructure (e.g., electricity, phones, distance to bus stop, presence of banks and co-operatives). Differences in village characteristics in the urban sector regression were accounted for by including village dummies rather than village characteristics themselves, since the community survey was not administered in the urban sample. All subsequent references to asset returns in this chapter pertain to these regressions. Full regression results are reported in Appendix Table 2.5 (for details, see Background paper 3).

2.32 The high returns to land ownership, particularly in rural areas, reflect increasing scarcity. Nearly all available arable land in Bangladesh is already under cultivation, and competing claims from agricultural and non-agricultural sectors have generated rising pressure on a finite supply. Over the years, land ownership distribution has also been changing toward growing landlessness and an increasing number of small and marginal farms (Appendix Table A2.6). At the same time, property rights are poorly defined and so frequently disputed that over four-fifths of rural litigation is related to land and ownership disputes (Rahman, 1998).

2.33 For those with no farm land, income from livestock accounts for a large share of agricultural incomes (Figure 2.8). Further, as evidenced by the 1998 flood, liquidation of livestock assets can provide an important means to ride out natural disasters or idiosyncratic shocks.

Figure 2.8. Share of Agricultural Income from Livestock



2.34 As with land, there is a negative association between poverty and access to common property resources such as *khas* land. Average per capita expenditures of people living in communities with access to these assets are between 2 to 3 percent higher than those in less advantaged settlements. While these assets are not as strongly correlated with expenditure levels as land ownership, the poor perceive them as an important source of livelihood (Nabi and Chakrabarty 2000). Not only is over-exploitation a mounting risk, however, these commons are also increasingly a source of conflict, as for example between poorer farmers and fish traders.

2.35 ***Better defined property rights for land and regulations on common resource management are needed.*** With pressure on land and common property resources rising, government has an important role to play in defining property rights and clearer regulations on common resource management. The poor are predominantly landless, and improvements in the operation of land markets, including tenancy as well as sales, are necessary to enable them to strengthen their position in the rural economy. Clear, enforceable property rights are a fundamental requirement for well-functioning land markets, for using land as collateral in financial markets, and for creating incentives for landowners to undertake long-term investments to improve land quality and productivity. Establishing clearer property rights as through the proposed issuance of ownership certificates is clearly a step in the right direction, though as noted in the recent Center for Policy Dialogue task force report (CPD 2001a), the main challenge will lie in actually implementing reform.

2.36 Given poor people's limited land ownership, the better management of common property resources in environmentally sustainable ways that benefit them, rather than better-off households, is also important. Forest cover has been declining at a rapid rate (3.3 percent per year between 1980 and 1990) and production of river and estuarine fisheries has also decreased by about one-fourth during the past 15 years. Equitable access is threatened by lack of transparency in sales of rights to such public resources and by capture of the commons by rich farmers. Sustainable and equitable exploitation of natural resources requires improvements in their management and productivity, increased participation in relevant decision making (including through decentralization of authority to local governments and community-based management approaches), and improvements in governance, especially through greater transparency in the allocation of natural resources (World Bank, 2001d). These reforms should be carried out in parallel with a streamlining of land records, tenancy acts, and land use policy.

2.37 Policy should focus on improving land productivity: The scope for redistributing land to the poor, or of bringing more land under cultivation is limited. Rather, the policy should stress measures to improve land productivity – in order to foster the agricultural growth that has led in the past to higher rural wages to the benefit of the poor (Mujeri, 2001) – as well as to promote rural non-farm activities. Increasing agricultural growth is important not only for daily wage laborers, but also for the poor who rely on the non-farm sector for their livelihoods. Because of the numerous forward and backward linkages between the non-farm sector and agriculture, the two sectors can have a pronounced impact on each other. Three areas for promoting growth – (a) raising productivity of existing crops, particularly rice, (b) diversifying crop production, and (c) expanding non-crop agriculture – are discussed below.¹⁸

2.38 Raising productivity of existing crops, particularly rice: Rice production alone accounts for 50 percent of the total value-added in agriculture and nearly three-quarters of gross cropped area. It has made impressive gains, led by both input growth and increase in total factor productivity. During the period 1975-97, input growth accounted for four-fifths of output growth, and total factor productivity (TFP) for the remaining one-fifth (Ahmed, 2001). Over the same period, the real price of rice in Bangladesh declined considerably, to the benefit of the poor who are mainly buyers rather than sellers of rice (Table 2.4). The progress is testament to the liberalization of markets for agricultural inputs and to investments in rice research that spurred the rapid spread of private tubewells for irrigation, fertilizer use, and new varieties.

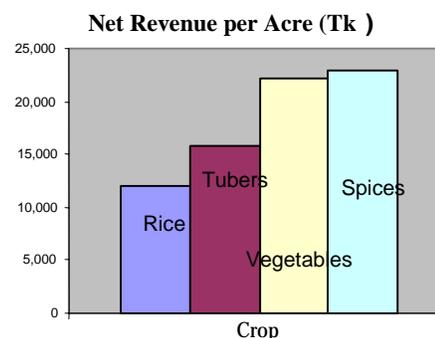
Table 2.4: Rice Market Participation Status, Rural Areas

Quintile	% of Population		
	Net Sellers	Net Buyers	Only Buyers
Poorest	18	24	58
2	23	29	48
3	30	28	41
4	38	26	37
Richest	42	22	37
Total	30	26	44

Source: 2000 HIES

2.39 Bangladesh could continue to increase its rice production. With limited prospects for expanding land area under rice cultivation, growth must increasingly rely on further shifts from traditional to high-yielding varieties and on improved management and technology to increase the productivity of existing resources and inputs.¹⁹ Intensification will require more balanced use of inputs of higher quality and better soil and water management practices to guard against soil degradation.²⁰ Reform should encompass changes in fertilizer policy (to correct the imbalance in N:P:K application) and in seed distribution (to spur private sector entry) as well as shift the emphasis of rice research and extension towards aromatic rice and improving cultivation practices.

2.40 Diversifying crop production: In the medium to long term, food grains are unlikely to lead agricultural growth given low income elasticities for cereals and increasing urbanization. Moreover, evidence suggests that several crops – e.g., potatoes, vegetables, onions, cotton – yield economic and private returns as high as, or higher than HYV rice (Ahmed et al., 2000). The 2000 HIES data



Source: Staff estimates, 2000 HIES

¹⁸ For a more detailed discussion of specific policy measures to improve land productivity, see *Bangladesh: A Proposed Rural Development Strategy* (World Bank 2000a).

¹⁹ Average yields in Bangladesh are still low compared to Indonesia, China, and other East Asian countries, leaving much scope for improvement (Dorosh 2000).

²⁰ More than half the total land area is nutrient deficient, subject to depletion of organic matter, or both.

corroborate this view, showing that net revenues per acre from cultivation of crops such as tubers, spices, and vegetables are considerably higher than from rice and wheat (see figure). However, small and marginal farmers are considerably less likely to cultivate these crops as compared to large farmers (Table 2.5), and rice still dominates crop production.

Table 2.5. Farm Size and Degree of Crop Diversification

Size of land	Percentage cultivating the crop								
Holding	Rice	Wheat	Tubers	Cash crops	Spices	Pulses	Oilseeds	Vegetables	Others
Landless	94	59	8	10	7	6	5	16	2
Up to 0.5	83	56	10	16	10	6	5	22	2
0.5 to 1.5	97	71	17	22	17	8	7	23	2
1.5 to 2.5	98	69	23	29	26	11	14	25	2
2.5+ acres	96	74	30	31	36	21	22	35	5

Source: 2000 HIES, rural sample

2.41 There are several reasons why diversification into other crops, particularly by small farmers, has been minimal. In addition to the higher price risk associated with marketing these crops, existing on-farm water management systems do not permit cultivation of both rice and non-rice crops on the same service unit (Mahmud et al, 2000). Other constraints include lack of adequate technology and knowledge about post-harvest handling and processing of non-rice crops; protection of some crops, which reduces incentives for diversification; and lack of marketing and credit infrastructure.

2.42 While agricultural diversification should be a market-driven outcome, the government can advance the process by purposefully releasing some of the constraints to diversification. It could (a) redirect research and extension to non-cereal crops (e.g., horticulture, vegetables) (b) withdraw protection from oilseeds and sugarcane – both negative value-added crops in Bangladesh (Mahmud et al, 2000) and (c) reduce price risks by improving marketing infrastructure and institutional credit facilities for private traders. Given the competing demands on scarce government resources, policymakers also need to consider the relative merits of spending on agricultural research, infrastructure investments, and the fertilizer subsidy.

2.43 **Expanding non-crop agriculture** holds considerable potential for growth – even, with the right institutions in place, for pro-poor growth. Given that livestock (including poultry) are among the most important productive assets and sources of income for the poor, improving livestock productivity will have a directly beneficial impact on both the assets and income of the poor. Fisheries have also been a source of employment for the poor, but ill-defined property rights and poor management of the commons restrict potential for pro-poor growth. Non-crop agriculture has had a good growth record in recent years with fisheries achieving the most outstanding record: production increases of 8.7 percent per year between 1995 and 2000. Annual growth rate of GDP from forestry (4.5 percent) was also faster than for crops (3.7 percent) or livestock (2.6 percent) during this period.²¹ The fisheries and livestock sectors, moreover, each provide significant shares (6 percent and 3 percent respectively) of total foreign exchange earnings. The main policy issues, aside from those related to property rights, relate to the facilitating role that the public sector can play in generating research and taking on market-oriented functions (for details, see World Bank, 2002a). For growth, it is recommended that the National Agricultural Research System redirect its emphasis

²¹ In 1999-00, the crop sub-sector accounted for 70 percent of agricultural GDP, fisheries 11 percent, livestock 10 percent, and forestry 9 percent.

and intensify research efforts on these sectors.²² Public sector involvement should focus on market-oriented functions such as disseminating information, overseeing the process of quality control, and monitoring farm input quality.

2.44 In order to ensure that the poor participate in and benefit from growth, NGO initiatives and Government-NGO partnerships in training and marketing services merit support and encouragement. Bangladesh has the advantage of drawing upon the experience of several on-going initiatives. For instance, the Bangladesh Rural Advancement Committee's (BRAC) program of providing integrated services in the poultry sector has enabled landless women to participate in the growth of this sector.

2.4: IMPROVED ACCESS TO CREDIT:

2.45 Access to financial markets is important for households and micro-enterprises. Credit that helps households smooth consumption during hard times also provides capital to create or expand micro-enterprises, reducing vulnerability and diversifying sources of income. But financial markets, because of problems of asymmetric information and transaction costs, often serve the poor badly.

2.46 *Some of Bangladesh's Banks and NGOs have been pioneers in designing innovative mechanisms to deliver credit to the poor.* The Grameen Bank and NGOs such as BRAC are world-renowned for their group lending methods that use joint liability and peer selection, rather than physical collateral, to overcome informational constraints. Other models for NGO micro-finance institutions (MFIs) include those that are not registered as banks but collect savings and make loans and rely on the wholesale functions of rural banking networks (e.g., Proshika, Association for Social Advancement). Others that do not handle funds instead facilitate the formation of member groups and their linkage with banks (e.g., Rangpur-Dinajpur Rural Services, Swanirvar). Bangladesh is rich in alternative MFI models that differ in the degree of involvement in providing financial services and in their dependence on rural banking institutions, gender of the target groups, the range of financial and non-financial services offered, and the eligibility criteria for membership. In 2000, an estimated 16.5 billion taka of loans was disbursed by 582 NGOs to invest in various sectors of the rural economy: small business (14 percent), livestock (21 percent), crop production (13 percent), and food processing (7 percent) (Credit and Development Forum, 2000).

Table 2.6. Distribution of Loans by Financial Sector, Rural Areas

	Distribution by Sector (%)	
	1991-92	1998-99
Loan Count		
Formal	8.6	2.4
Semi-Formal	59.4	81.2
Informal	32.0	16.3
Total Amount Disbursed		
Formal	33.9	5.2
Semi-Formal	43.8	75.1
Informal	22.4	19.7

Source: 1991-92 and 1998-99 BIDS-World Bank Survey.

2.47 *By contrast, penetration of formal financial institutions in rural areas remains relatively weak.* In addition to the semi-formal NGO-based MFIs, rural financial markets in

²²The research budgets are focused to a great extent on crops. Between 1995-2000, crop research accounted for 80 percent of ADP expenditures on agricultural research and 88 percent of the current research budget.

Bangladesh also contain formal institutions (commercial and specialized banks and credit cooperatives) and a range of informal financial intermediaries (e.g., local moneylenders, traders in agricultural inputs and outputs markets, shopkeepers, landlords, friends, and relatives). The importance of formal financial institutions appears to have declined dramatically in the past decade (Table 2.6). In 1998-99, formal credit accounted for 2.4 percent of rural credit transactions of 500 taka or more compared to 81 percent from semi-formal and 16 percent from informal lenders.²³ Although informal lending has declined in importance, it continues to account for nearly 20 percent of the total amount disbursed.

2.48 Access to credit in Bangladesh is segmented, reaching households at the lower and upper ends of the income distribution. The ‘missing middle’ -- small and medium farms and non-farm enterprises -- are currently underserved. The financial sector in Bangladesh is highly segmented, with the formal banking system mainly providing services to the relatively affluent, and MFIs targeting the poor (typically those with less than 0.5 acres of land). Small and middle farmers and enterprise owners – those who are “too rich” to avail of MFI credit but not rich enough to access the formal banks – face a dearth of options in seeking to obtain credit services from the formal/semi-formal sectors. Data from the 2000 HIES suggest that credit plays a relatively minor role in helping households set up businesses (Table 2.7). A large share of business assets tends to be inherited, thus perpetuating disparities across generations in asset ownership between the poor and non-poor.²⁴ Two factors are at play. First, access to credit appears to be inadequate; two-thirds of the households operating family businesses cite inadequate capital or credit as the primary constraint they faced. Second, the prevalence of self-employment using mainly family capital also suggests the lack of good savings institutions providing alternative opportunities for investment and pooling resources in rural areas (Lanjouw and Lanjouw, 2001).

Table 2.7. Main Source of Finance for Setting-up Family Business

Main Source	1st Reported Source			2nd Reported Source		
	Assets < 5,000	Assets 5-100,000	Assets > 100,000	Assets < 5,000	Assets 5-100,000	Assets > 100,000
Inheritance	14%	21%	40%	4%	6%	11%
Own-savings	59%	61%	48%	25%	28%	35%
Relatives or friends	9%	6%	6%	30%	32%	23%
Agri./Commercial Bank	1%	1%	2%	1%	2%	6%
NGO Banks	4%	4%	1%	11%	7%	2%
Sale of Assets	1%	3%	1%	3%	2%	4%
Money Lender	6%	1%	1%	8%	3%	2%
Other	7%	2%	2%	18%	20%	16%

Source: 2000 HIES

2.49 Access to credit can play a vital role in improving poor households’ economic well-being, as well as leading to social improvements. Various studies have found positive impacts of MFI programs on food consumption (both in quantity and quality), health, education, and savings behavior. These institutions have been especially important for women and households headed by women, who often have difficulty getting credit. Studies find that such access to credit has

²³ An important caveat is that the 1998-99 data correspond to the period following the floods, when semi-formal credit was scaled up. Data after this period would be needed to check whether semi-formal institutions have continued to account for the overwhelming share of loans made in rural areas.

²⁴ Not surprisingly, households that had business assets worth one hundred thousand taka or more had much higher per capita expenditures (almost three times as high) than those in the first group (with assets less than 5000 Tk.).

strengthened the women's bargaining position with their husbands and increased their physical mobility, their self-confidence and their participation in public life (Zeller et al. 2001, and citations therein).

2.50 *Public support for the expansion of MFIs has had high payoffs and should be continued.* The Palli Karma Sahayak Foundation (PKSF), which acts as a wholesaler of credit to small and medium partner organizations (PO) that on-lend these funds to their clients, has established itself as a highly successful apex organization supporting MFIs of all sizes as well as facilitating cross-learning and dissemination of best-practice examples. Various guidelines and policies designed by PKSF, with active support of POs and stakeholders, have had a profound impact on operations, portfolio quality, accountability, and sustainability of the micro-finance industry in Bangladesh (World Bank 2001b). Improved interaction and exchange of information has led to increased focus and debate among different MFIs currently operating in Bangladesh on how best to serve the so-called "hard-to-reach" poor.

2.51 *Formal financial sector functioning needs to be substantially improved.* The public sector financial institutions have had a poor record in terms of savings mobilization and outreach to the poorer segments of the rural population (Zeller et. al., 2001). Commercial and agricultural banks lend mostly to households with large farms (Khandker, 1998). Improvements, though, will not be possible without removing handicaps that plague the entire banking system. Several recent World Bank reports (summarized in World Bank, 2001e) have highlighted problems of under-capitalization, non-performing loans, and excessive political interference, shortcomings that are similar to those emphasized by the government-appointed Bank Reforms Committee. Improving governance and financial discipline, and strengthening the legal framework in the banking sector is important, if the agricultural and commercial banks are to become effective intermediaries for rural entrepreneurs.

Box 2.1. BRAC's MELA Program

"BRAC launched Micro Enterprise Lending and Assistance (MELA) program in December 1996 with a view to providing loans to existing micro enterprises with high potential for growth. This section of the market, usually referred to as the 'missing middle' remains typically unserved – both by micro-finance and commercial banks. Yet, the growth of such enterprises can have important poverty alleviation effects through direct employment generation and / or consumption linkages. A MELA loan is between US\$ 400-4,000 (Tk. 20,000 – 200,000). As of December 2000, the program had 7,665 borrowers and a total of \$US 14 million (Tk. 720 million) has been disbursed to them. The outstanding stands at US\$ 5.8 million (Tk. 290 million).

MELA is serving a new market segment and prior knowledge of financial services provision in this market is relatively less developed in Bangladesh. The lending technology, risk assessment and the need for financial service of this client group is fundamentally different from that of the micro-finance market. MELA program has already proved that there is significant demand and that serving this market is possible. In the future, MELA expects to be a solid platform for new vision and thinking in providing innovative financial services for micro-enterprises."

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2.52 *Expanding access to credit to small and medium farms and non-farm enterprises should be an important policy focus.* Promising experiments are under-way in financing small-scale agriculture and micro-enterprises (Box 2.1). These initiatives are very promising for poverty reduction, because expanded agricultural production and the formation of new micro-enterprises could create the types of wage and salary employment so important to the poor. For example, 2000 HIES data indicate that of the nearly 8 million people employed by household-based enterprises, about 1.7 million work for enterprises with assets of less than Tk. 100,000 (not counting family

members working in the enterprise).²⁵ Assisting such small and medium enterprises expand operations will bring a twofold benefit through both direct (poor operating such enterprises)²⁶ and indirect (stimulating non-farm employment opportunities and wages for daily wage workers) channels. Exploring options to reach micro enterprises is a relatively new field of activity, and merits closer monitoring and research to assess the extent to which it contributes to poverty reduction.

2.5: OVERALL ECONOMIC ENVIRONMENT AND COMPLEMENTARY PUBLIC ASSETS:

2.53 Building private assets to accelerate private sector-led, outward-oriented growth is consistent with the growth strategy Bangladesh has successfully followed in recent years. Creating a more conducive environment for higher levels of returns to private assets in turn requires several important elements. First, public order and rule of law, sound macroeconomic management, and continued outward orientation are all pre-requisites for higher economic growth. Second, adequate physical infrastructure is needed to help complement (and raise returns to) private assets. Finally, more active partnerships with (and promotion of) institutions that foster social inclusion and participation is an important element of a more pro-poor growth strategy.

Favorable Investment Climate:

2.54 The overall environment and investment climate in a country strongly influences the level of returns to private assets. If firms cannot operate profitably because of problems of law-and-order and lack of personal safety, bureaucratic harassment, or macroeconomic instability, facilitating the accumulation of private assets will bring only limited benefits.

2.55 **Law-and-Order:** The governance challenges facing Bangladesh have been the subject of considerable recent attention and discussion (e.g. Sobhan 1998, CPD 2001, PARC 2000, World Bank 2001h, Stern 2002), with broad consensus emerging that institutional reform should rank among the government's top policy priorities. However, with governance problems so deep-seated and pervasive, what are the areas that merit priority action? The findings of a recent nationwide study on governance in Bangladesh point to improvements in law and order as perhaps the single-most important area for reform.²⁷ Breakdown of law enforcement in Bangladesh ranked as the top concern of both rank-and-file citizens and entrepreneurs covered in the study. No other type of service drew as much criticism as the perceived deterioration in quality of police services, voiced by 69 percent of interviewed households. Only 12 percent of those surveyed thought that police corruption was low.

2.56 Not only did the citizens and businesses regard the country's police as corrupt and inefficient, but in their estimation, police honesty and responsiveness have also dropped markedly in recent years. In an earlier study (1998) conducted by the Mahbub-ul-Haq Human Development Center, slightly over one-half of all respondents in Bangladesh reported "heavy or malignant corruption" in the police force (52 percent) and deterioration in quality (53 percent); businessmen ranked the police's service standard lowest among all forty-four organizations evaluated. Reported

²⁵ Group 1 with assets of less than 5000 taka included rickshaw pullers, fisherman, petty hawkers and artisans making pati, chattais, etc.; group 2 (between 5000-100,000 taka) included those engaged in various trading activities such as teashops, retail outlets, tailors, etc., while group 3 enterprises (more than 100,000 taka) were typically textile-related concerns, jewelers, contractors, health care professionals, etc.

²⁶ The 2000 HIES data indicate that income from enterprises in group 1 (total assets less than Tk. 5,000) average Tk. 25,000 per annum, and for those in group 2 (total assets of Tk. 5,000 – 100,000) are around Tk. 57,000 per annum, a modest sum for an average family of 5. Taken together, group 1 and 2 enterprises comprise four-fifths of total family-based enterprises.

²⁷ The study on governance in Bangladesh sponsored by the World Bank, relied on three nationwide parallel surveys of households, businessmen, and civil servants in which 2,952 households were interviewed. A wide range of publicly provided services were covered in the household survey: education, health, law and order, judiciary, and land administration, drinking water, electricity, gas, telephones, as well as loan services. For details, see World Bank 2002c.

crime rates were quite high, with a substantial proportion going unreported to the police. Seven percent of all households surveyed reported being crime victims, with theft (31 percent) and extortion-related violence (23 percent) being the two most commonly reported types of crimes among victimized households. A substantial proportion – ranging from 6 to 41 percent, depending on the nature of crime suffered – end up not even reporting the crimes to the police.

2.57 Deterioration in law-and-order harms women in particular. A recent study in Bangladesh documents the increase in reports of violence against women indicated by police records between 1995 and 1998. The rise came despite the social stigma attached to reporting such crimes, a tradition so strong that an overwhelming share end up not being reported (Matin et.al., 2000).²⁸ Similarly, news reports of acid attacks and harassment of women have been gaining increasing prominence in the media. Women's increasingly prominent role as income earners is reported to have led to a decline in domestic abuse and improvements in their status in some localities,²⁹ but the deteriorating law-and-order situation limits their freedom of movement and their related ability to take a larger place in the workforce.

2.58 The maintenance of public order and application of the rule of law constitute the government responsibility that most urgently demands attention and reform. Protection of life and property is probably the single-most important role of a state; indeed, some would insist that it is at the very foundation of the social contract between the government and its citizens. Unless households and investors have confidence that their lives and property are secure and their contracts enforceable, they are unlikely to commit the resources and investment required to accelerate the rate of growth. Furthermore, greater emphasis on police and judicial reform has the added benefit that it would most likely also yield high, overall economic payoffs, since fair and strong enforcement machinery is a necessary precondition for implementing reform anywhere. For example, a strong law and order system, with the accompanying effective investigative and enforcement machinery, would enable better loan collection, deter corruption in sectors such as education, health, and urban infrastructure, as well as help improve the overall business environment.

2.59 **Macroeconomic Stability:** Good macroeconomic management kept inflation in Bangladesh within single-digits during the past decade. Low inflation benefits the population in general, but especially the poor. Not only does it provide a more predictable and stable environment for long-term investments, but also, as noted in section 2.1, poorer households keep a proportionately greater share of their savings in financial assets that high inflation often erodes in value. In addition to the favorable impact of several bumper harvests and low international inflation, prudent economic management has also helped curtail inflation. The overall central Government deficit averaged around 4.7 percent of GDP during FY90-98, with domestic financing averaging a modest 1.1 percent of GDP. This record compares favorably with the level of deficits and domestic borrowing observed in other South Asian countries during the same period (though not necessarily with other countries outside the region). Total external debt remained relatively low (36 percent of GDP in FY01), and was owed mainly to creditors at highly concessional terms.

2.60 However, the fiscal position has considerably deteriorated in recent years with a trend rise since 1998 in the government's fiscal deficit to 6 percent of GDP in FY01, financed in large part by higher domestic bank and non-bank borrowing. The rise in the consolidated fiscal deficit, which

²⁸ The study includes suggestions on potentially fruitful areas for further research, as well as reforms in the judicial system that can help women seek legal redress for crimes of violence directed against them.

²⁹ Nabi et. al. 2002.

takes into account the increasing losses of state-owned enterprises (SOEs), is even higher.³⁰ Gross SOE losses were on average equivalent to 30 percent of budgetary spending on health and education during FY91–FY01. Continued high losses in this sector may precipitate a fiscal crisis that would jeopardize the macroeconomic stability of the past decade. A fiscal crisis would be particularly costly for the poor, since declines in social spending often accompany not just the crisis but the adjustments involved in remedying it, and at the margin, the poor are more likely to lose benefits when budgets shrink (see evidence in Chapter 4).³¹ During FY02, the government has taken corrective measures to reduce the fiscal deficit to 4.6 percent of GDP, and it is developing a medium-term macroeconomic framework to move it toward a more sustainable level.

2.61 In the near term, curbing hemorrhage from the SOE sector remains Bangladesh's highest macroeconomic management priority. Tackling the problems of the state-owned enterprise sector requires a policy response involving a mixture of privatization, with due attention to workers' rights to severance pay, and closure of non-viable enterprises. The Government's recent decision with regard to Adamjee Jute Mills has been a bold step in line with these policy imperatives. However, there are still many sectors of the economy where the presence of state enterprises creates distortions which inhibit the development of private sector.

2.62 ***Outward-oriented growth policies:*** Largely as a result of trade reforms introduced in the late 1980s and particularly during the early 1990s, Bangladesh now has a much more open economy - - measured by volume of trade, quantitative restrictions, average tariff rates, and black market foreign exchange premium. The real exchange rate has held relatively stable through the nineties, when the adoption of export-promotion policies along with gradual trade opening brought buoyant export growth, averaging 14 percent per annum in dollar terms. Rapid integration with the global economy has meant that the country's trade-to-GDP more than doubled over the last decade.

2.63 Bangladesh's increased trade openness has yielded considerable benefits – among them, and particularly for the poor, stabilized and lower food-grain prices. As Chapter 4 notes, since the liberalization of food grain imports in the early nineties, private sector imports of rice have on several occasions contributed to filling the food availability gap after poor rice harvests, limiting the potential upward spike in prices. Similarly, liberalization of imports resulted in rapid investments in private tubewells for irrigation, which coupled with increased fertilizer use and adoption of new varieties, helped boost agricultural production. Trade policy has thus played an important role in enhancing food security in Bangladesh. Further, as the robust growth of the ready-made garment, leather footwear, and food and beverage industries in Bangladesh has shown, the shift of labor and capital from import-competing industries to expanding, newly competitive, export industries has been a strong job-creating force for both men and women. A recent study on globalization in the context of gender in Bangladesh concludes that it has had a significant impact on changing the lives of women, bringing more of them into the labor market, enabling their independent migration to urban areas, and giving them greater public visibility.³²

³⁰ The Bangladesh SOE sector comprises 40 state corporations and boards, along with their subsidiary enterprises, often enjoying monopoly power in a number of key sectors (including the traditional infrastructure sectors of power, gas, ports, railways, but also in petroleum, fertilizer, sugar, and jute). SOEs have reported assets equivalent to 32 percent of GDP, and the annual investment of the SOE sector is currently about 7 percent of Bangladesh's overall gross domestic investment. Yet the operating surplus of SOEs in Bangladesh has turned from 0.6 percent in FY91 to *negative* 0.9 percent of GDP in FY01. For more details, see the PER background paper on fiscal policy, 2001).

³¹ de Ferrante et. al. (2000) examine government spending for several countries in Latin America and find that even when governments try to protect social spending during economic downturns, social spending *per poor person* does fall.

³² Khundker 2002.

2.64 Bangladesh has the potential to reap considerable gains from expanding its export base in labor-intensive industries since it has low unit labor costs compared to its main Asian competitors (Appendix Table A2.7). Completing the trade reform agenda to reduce the anti-export bias still in place,³³ and creating the climate to improve the low productivity that penalizes competitiveness,³⁴ will help the country realize further gains from a continuing outward-oriented growth strategy.

Physical Infrastructure:

2.65 ***Average living standards in Bangladesh are strongly correlated with access to infrastructure.*** The availability of local public infrastructure is important to the development of a modern agricultural and non-farm sector. Farmers have little incentive to diversify crop production into higher value-added crops if what they grow cannot easily be sold, or if critical inputs are not readily available. Industry, businesses, and households all depend on public infrastructure for routine daily activities—providing lighting or operating equipment in a business, transporting goods to the market, and communicating with suppliers and customers. The multivariate regression model cited earlier was estimated to explore how various household and community characteristics in rural areas correlate with per capita expenditures (Background paper 3).^{35,36} Table 2.8 presents the percentage increase in per capita expenditure associated with the community infrastructure characteristics, after controlling for household characteristics.

Table 2.8. Per-capita expenditures & Community Infrastructure

Variables	Percent change in per capita expenditures
<i>Infrastructure and Access to Markets</i>	
Electricity	5.7
Phone	12.4
Distance to bus stop (km)	-0.5

Source: 2000 HIES rural sample. *Notes:* The reported estimates are the percentage increase in per capita expenditure associated with each variable, controlling for household characteristics.

2.66 The regression coefficients show strong correlations between infrastructure availability and per capita expenditures, even after controlling for personal characteristics. Individuals living in communities that have electricity and phones have 6-12-percent higher expenditure than those where such services are absent. The degree of isolation, as measured by the distance to the nearest bus stop, accounts for a significant but small part of the differences in expenditure levels across communities. These effects indicate that infrastructure investments designed to improve area characteristics should play an important role in poverty reduction. Of the several ways that infrastructure works to strengthen the environment for growth and poverty reduction, three are noteworthy in Bangladesh:

- ***Creation of marketed surplus from small farmers:*** Evidence from Bangladesh shows that both producer prices and marketed surplus are higher in villages with better infrastructure. For example, Ahmed and Hossain (1990) report that paddy and rice prices are 2 percent and 6 percent higher respectively in villages with relatively developed infrastructure. Marketed surplus

³³ South Asia region has the highest average tariffs in the world. In addition, there remain in place in Bangladesh, significant non-tariff barriers to the free flow of goods and services. For more details, see World Bank, 2002b.

³⁴ According to a study comparing labor productivity in several developing countries, Bangladesh's was among the lowest productivity levels (in terms of GDP per person employed) as a percent of the United States (Ark and McGuckin, 1999).

³⁵ The analysis was done for rural areas only since the community questionnaire was not administered in the urban sample.

³⁶ Note that although theory predicts that many of the variables included in the analysis do indeed contribute to poverty reduction, the statistical relationships should be interpreted as correlates and not as determinants since causality can run both ways for some variables.

for small farmers (less than 0.5 acres) is 52 percent in regions with developed infrastructure, nearly 4 times the surplus observed in less-developed villages.

- **Development of the non-farm sector:** Comparing the importance of the non-farm sector as a source of livelihood across communities covered in the 2000 HIES reveals that availability of basic infrastructure and non-farm sector work are highly correlated in Bangladesh. For instance, where commercial electricity connections were available, localities were more than four times as likely to report small cottage industries as a main economic activity. Likewise, the transport and services were also more likely to show up in such places as main economic activities.
- **Improving financial intermediation in poor areas:** Previous studies have found that credit conditions for small farmers improve considerably when improved roads, telephones, irrigation, and HYV food grain technologies bring increased output and market competition to formerly isolated regions (Chowdhury, 1992; Crow and Murshid, 1990). Infrastructure is also critical to the targeting of the poor by MFIs. They tend to place their officers within more developed rural areas with better access to transportation and communication infrastructure and banks and to avoid areas at high risk of flooding and other adversities (Zeller et. al. 2001).

2.67 **Bangladesh has done well compared to South Asian countries in improving access to water and sanitation, but upgrading physical infrastructure remains a priority concern.** Comparing infrastructure in Bangladesh with selected countries in the region (Table 2.9) confirms that access to clean water has been a success story. With the increased use of tube-wells, the vast majority of Bangladeshis now rely on groundwater for drinking and cooking, and access to improved water source and sanitation is now better than in India and Pakistan. However, many tube-wells are now known to be contaminated with naturally occurring arsenic. Since most of the wells have not been tested, however, the exact scale of the problem is not known. Still, a potential danger is that many people may revert to using surface water with high levels of bacterial contamination, increasing the risk of diarrhea and other water-borne diseases.

Table 2.9. International Comparisons of Selected Infrastructure Indicators

Indicator	Bangladesh	China	India	Pakistan	Thailand	Vietnam
GNP per capita (Dollars 1999)	370	780	450	470	1,960	370
Population (Millions 1999)	128	1,250	998	135	62	78
Population Density (persons per sq. km: 1999)	981	134	336	175	121	238
Access to improved water source (% of population, 1990-96)	84	85	81	60	89	36
Access to sanitation (% of population, 1990-96)	35	..	16	30	96	21
Commercial energy use per capita (kg. of oil equivalent, 1998)	159	830	486	440	1,153	440
Electricity consumption per capita (kilowatt-hours, 1998)	81	746	384	337	1,345	232
Paved roads (% of total, 1998)	9.5	..	45.7	57.0	97.5	25.1
Telephone mainlines (per 1,000 persons, 1998)	3	70	22	19	84	26
Domestic credit by banking sector (% of GDP, 1999)	33.4	130.4	44.9	47.0	126.0	21.9

Source: World Bank, 2001a.

2.68 Undoubtedly, as well, Bangladesh has already made remarkable progress in developing rural roads and improving access to electricity. Improved road connectivity in Bangladesh during the last decade has played an important role in integrating markets, in reducing both inter-temporal and spatial variation in prices of important food commodities, in improving availability of critical agricultural inputs, as well as in spurring the expansion of the rural non-farm sector. The road network has grown considerably, particularly for roads connecting rural growth centers, new bridges and culverts, and the share of roads paved with asphalt or bricks. Although general road conditions have also improved significantly, access to productive physical infrastructure still trails other countries (Table 2.9), and infrastructure bottlenecks substantially restrict the economy's potential. Further infrastructure development will be necessary to accelerate growth; this has been recognized by GOB in the current 2002-03 ADP which accords high priority to improvement in infrastructure. Emphasis should be placed on upgrading and maintaining existing infrastructure along with selectivity and investment in strategic areas so as to correct geographic imbalances and complement new directions of the economy.³⁷

2.69 Increasing electricity supply and upgrading ports, inland waterways, and road networks are important for maintaining the momentum of greater economic diversification. The penetration of cellular telephones in rural areas illustrates that the government does not have to provide the infrastructure itself. In addition to further expansion of the private telephone network and an accompanying penetration of modern information technology, small private electricity networks could expand beyond the Rural Electricity Board's rural network, the growth of which will take decades to cover all rural areas even under optimistic projections. Some of the key issues in these sectors are outlined below; policy priorities and actions are discussed in greater detail in the companion Public Expenditure Review Report (World Bank, 2002a).

2.70 **Electricity:** Even though survey data indicate that access to electricity has improved between 1995-96 and 2000 (Table 2.10), Bangladesh remains far from universal access to electricity, now absent from one-fifth of urban households and four-fifths of rural ones. While this sector receives a subsidy of around \$350 million per year (equivalent in magnitude to the total volume of assistance through the targeted food assistance programs), this subsidy disproportionately reaches richer households. Survey data indicate that the richest one-fifth of households are about five times as likely to have an electricity connection as the poorest fifth. Meanwhile, power shortages reduce industrial output by an estimated \$1 billion a year, and GDP growth by 0.5 percentage points a year (World Bank, 2001c).

Table 2.10. Percentage of Households with an Electricity Connection

Per-capita Quintile	1995-96 HES			2000 HIES		
	Urban	Rural	Overall	Urban	Rural	Overall
1 (Poorest)	35	1	7	46	3	12
2	62	5	14	72	8	21
3	79	8	19	88	16	30
4	91	14	27	97	24	38
5 (Richest)	96	24	36	99	44	55
Overall	73%	10%	21%	80%	19%	31%

Source: 1995-96 HES and 2000 HIES

³⁷ HIES 2000 community data show considerable disparities in availability of infrastructure across communities. For example, one-third of the communities surveyed were not connected to electricity, two-fifths did not have a market / bazaar within the community, two-thirds did not have a post-office, and 246 out of the 252 rural communities surveyed did not have any cold storage facilities within the community.

2.71 **Roads:** Many of the rural thoroughfares currently classified as roads are impassable for motorized vehicles. Considerable variation exists in the utilization of the road network in different parts of the country, with significant bottlenecks and congestion in many locations due to inadequate capacity. Maintaining the core network in good condition and selectively upgrading other roads based on well-conceived and sequenced strategy are priority concerns.

2.72 **Inland waterways:** Construction of simple but safe berthing facilities, dredging of important thoroughfares, and providing adequate clearance under road bridges are important measures that will allow the inland waterways system, which play an important role in internal transportation of goods, to continue to expand the share of total freight carried through the country's extensive boating system.

2.73 **Ports:** Cargo yards at Chittagong, which handle 80 percent of Bangladesh's foreign trade, are severely congested. A recent study on the effects of higher shipping costs on the garment sector estimated that Bangladesh's exports could earn about 30 percent more -- \$1.1 billion per year -- if various port inefficiencies could be removed. (Cookson and Ahmed, 2000).

Social Assets and Inclusion:

2.74 I-PRSP consultations at all levels in Bangladesh have confirmed that strengthening local governments is one of the most desired institutional changes needed for faster poverty reduction (GOB, 2002). Decentralization and participation – by enabling people to voice their demands for intervention and hence shape the development process – seem particularly important in Bangladesh where there is considerable heterogeneity among the poor. Further, decentralization offers the potential for harnessing local knowledge to target interventions as is effectively done with public social safety net programs (Chapter 4). Supporters argue that, while Bangladesh has made reasonable progress at poverty reduction during the past decade, accelerating the rate of poverty reduction will require increasing the development choices available at the local level as well as better inclusion of all social groups in these choices.

2.75 **Bangladesh is fortunate to have an extensive network of non-governmental organizations.** These organizations have been active in multiple arenas such as health, education,

water supply and sanitation, micro-credit, development of agri-businesses, as well as in the management of common property resources. NGOs in Bangladesh are particularly well-suited to act as service providers. They have intimate contact with and knowledge of grass-root realities, greater accountability, and ability to innovate and develop multiple delivery models

that are better adapted to local conditions. Surveys routinely show that users prefer NGO-run schools and health facilities for their superior quality. Another vital role for non-governmental and community-based organizations is to help improve local-level accountability, as well as lobby for the rights of specific disadvantaged groups that may otherwise lack voice (e.g. women, ethnic minorities,

Box 2.2. A New Wave of Change: UP Elections in Bangladesh

The 1997 union council (Parishad) elections revealed an impressive voter turnout. Poor women and men belonging to societies and groups organized by NGOs won about 10 percent of the eligible positions. Even when the wealthy and males are elected, the emerging trend shows that they are generally more educated, progressive, and younger than their predecessors. At the last union council elections, participation of women matched that of men.

tribal populations).³⁸ NGOs have an important complementary role to play through their social mobilization activities in fostering a favorable environment for successful decentralization to take place (Box 2.2).

2.76 *Support is growing for progress in strengthening local governments to promote participation.* Despite attempts (albeit weak) by successive governments over the years to introduce reforms to strengthen local government, Bangladesh has had relatively limited success in implementing decentralization. Most initiatives to-date have been partial and have not been sustained in the face of strong opposition from powerful interest groups. However, support for greater progress on decentralization in Bangladesh has been growing in recent years. The 1996 National Commission on Local Government recommended a 4-tier system of rural local government for Bangladesh: Zilla (district), Upazila (thana-level), Union, and Gram (village). While three new Acts subsequently passed in the Parliament,³⁹ elections have only been held to the union-council tier. Upazila council elections are still pending, while local government systems at the village and district level have not yet been implemented.

2.77 How best should Bangladesh proceed with decentralization? Among various approaches tried in different countries, examples include the “Big-Bang” approach of South Africa and Pakistan, the gradual approach of India, as well as the “just-do-it” approach of Indonesia. Among the most important lessons emerging from the experience of countries that have successfully implemented decentralization is that transfer of power and resources from central to local and intermediate governments is a process and not a discrete event. For decentralization to advance, this process must be homegrown, backed by strong, broad-based consensus and commitment within the country, and should move at a pace commensurate with opportunities as they arise, so as to circumvent stalling of reforms by opponents who fear erosion of their power base.⁴⁰ International experience provides a number of important guiding principles for successful implementation of decentralization reforms:

2.78 *An encompassing legal framework is essential for effective local government.* While the 1996 National Commission recommended a 4-tier system of local government for Bangladesh, only one-tier is presently in place, and given financial, administrative, and technical constraints, the commission’s vision may take some time to be achieved. Considerable debate continues with regard to the exact number of tiers of local government that are presently feasible.⁴¹ An important guiding principle is that local government units should not be so small as to pose problems of viability, but at the same time should not be so large as to prohibit peoples’ effective participation in their operation. Following emergence of consensus on the appropriate number of tiers, as well as clear delineation of their responsibilities and respective spheres of action, a consolidation of the legal framework for local government in Bangladesh may be necessary. At present, the 22 acts and ordinances enacted by various governments since 1972 may need to be rationalized so as to provide the appropriate legal cover for the planned reforms. A consolidated Local Government Act may be needed to address the issue of constitutional provisions of rights, responsibilities, and resources for local governments.

³⁸ It is important to note that NGO involvement does not automatically imply greater local-level accountability. Improving local government accountability through NGO pressure needs to go hand-in-hand with efforts to improve NGO accountability to their own constituents, NGO coordination and strengthening of NGO umbrella organization to enable advocacy beyond the thana level. At the same time, better governance and stronger local government that has the ability to respond to local pressures is important.

³⁹ The 1997 Local Government (Union Parishad) Act, 1998 Upazila Parishad Act, and 2000 Zilla Parishad Act.

⁴⁰ Extensive capacity-building and advocacy may be needed for this purpose (for example, the recently constituted Local Government Support Group).

⁴¹ For instance, the Center for Policy Dialogue’s Policy Brief on Administrative Reforms and Decentralization notes that, in view of the country’s present circumstances, it may be more practical to have a two-tier system of local government at the Upazila and Union levels only (CPD 2001).

2.79 ***Efforts to strengthen local government need to be backed by clear policies on fiscal decentralization.*** International experience clearly points to the crucial role that fiscal decentralization plays in attaining a truly responsive decentralized system. A critical indicator of fiscal decentralization is the autonomy of local governments to finance their expenditures and mobilize revenues. At present, no clear delineation of functions separates the various central government agencies and the Union Parishad with regard to expenditure responsibilities. Likewise, there is very little delegation of financial autonomy within different government agencies. The lack of appropriate rules and systems for fiscal decentralization has been a key constraint in the past to the effective implementation of decentralization initiatives. Relevant lessons from other countries indicate that at least three factors ensure fiscal discipline in a decentralized governance structure: (a) clarity in expenditure responsibilities, (b) delegation of powers to raise revenues through local taxes and user fees, and (c) a well-designed fiscal transfer system to provide the additional resources needed for effective implementation.

2.80 The assignment of public services to local governments needs to be based on considerations such as economies of scale, proximity to beneficiaries, consumer preferences, and flexibility in budgetary choices on the composition of public spending. In addition, fiscal autonomy of local government requires both that local governments operate under firm budgets that ensure that they do not overspend, but also that their funds match their responsibilities. Possible instruments for local governments to raise revenues in Bangladesh include Immovable Property Transfer Tax, Land Development Tax, and leasing proceeds of haats, bazaars, fisheries, stone and sand quarries (Siddiqui 2000). In the short term, despite transfer of powers to raise revenue, it is unlikely that local governments in Bangladesh will be able to raise sufficient revenues to cover their total costs and are likely to need financial support from the central government. A simple and transparent fiscal transfer program consistent with objectives can play an important role in enhancing the accountability of the system. For instance, Indonesia's design of health and educational grants uses simple and objectively quantifiable indicators in the allocation of funds, and conditions for continued eligibility for these grants emphasize objective standards.

2.81 ***Capacity-building and strengthening local-level accountability are important complementary initiatives needed for effective decentralization.*** Those who oppose decentralization reforms often argue that local constituencies have a paucity of suitably qualified individuals with the requisite skills to take on the challenging responsibilities entrusted to them. An eloquent rejoinder to this position can be found in the words of the Venkatachallaiah Commission:⁴² "democracy implies intellectual acceptance of the position that self government is better even than good governance." Nonetheless, this criticism does point to the need to go beyond simply devising a good master plan for decentralization. A well-conceived and sequenced program of reform is an important pre-requisite to successful decentralization, but equally important is effective communication to ensure that the plan developed is well-understood among all parties concerned and that it incorporates sufficient provision for checks and balances to prevent misuse of power as well as to ensure accountability among both elected officials and civil servants. Complementary capacity-building efforts to familiarize elected officials with their new roles, powers, and responsibilities are essential for the success of any such initiative.

⁴² This commission has recently been appointed by the Law Ministry in India to review the workings of the Indian constitution with a view to making recommendations on how best to strengthen local government.

KEY FINDINGS AND CONCLUSIONS	POLICY IMPLICATIONS
<p>Education</p> <p>Achievements over the past two decades have been impressive. Roughly 9 out of 10 children eventually enroll in school, and gender and urban-rural parity in enrollments is now a reality. However, progress in improving enrollments has stagnated in recent years and varies considerably across regions; late entry into the schooling system is widespread; and a large fraction of poor children never enroll in school even though they are not working. Low enrollments may in turn be tied to quality of education, itself a serious concern.</p> <p>Share of GOB spending devoted to education is high, and primary education expenditures play an important re-distributive role in promoting equitable access to basic education. However, the pro-poor bias of public spending disappears at the post-primary levels. Incentive programs play an important role in attracting children to school but are not necessarily reaching the poor, either due to leakage or criteria set for targeting.</p>	<p>Priority areas in education are to focus on improving its quality and to provide access to the hard-to-reach poor. Mobilizing more resources for the education sector, shifting the spending balance away from teacher salaries toward other non-salary inputs, and decentralizing management more purposefully so as to improve accountability are all measures likely to improve quality of education as well as raise incentives for enrollment.</p> <p>On equity grounds, priority for public funding for primary education and (to a somewhat lesser extent) secondary education should continue. The pro-poor focus of incentive programs should be improved by stemming leakage and targeting resources to regions/groups where the largest gender gaps exist and where enrollment rates are lagging.</p>
<p>Health</p> <p>Health outcomes have improved considerably over the years. Targeting prenatal care and immunizations to the poor has been successful. Nevertheless, substantial inequalities persist in health outcomes and in access to adequate care (particularly for the urban poor), and the quality of care is a concern.</p> <p>Public health expenditures play an important re-distributive role, with outlays for child care, family planning, control of communicable diseases, and prenatal care benefiting the poor the most. Expenditures on curative care are not as equitably distributed.</p>	<p>Priority areas for improving health outcomes for the poor include: improving access to health care for the urban poor in partnership with NGOs; ensuring the quality of private sector providers, potentially through consumer councils; improving the quality of curative care in government facilities; and continuing the attention to behavioral change communication for better maternal and child health.</p>
<p>Child Nutrition</p> <p>Child malnutrition, despite recent progress, remains a challenge. Its incidence is particularly high in rural areas of a few districts. While child malnutrition is strongly linked to income, factors such as lack of access to safe water and sanitation, low level of mother's education, lack of access to health facilities, poor village infrastructure, high food prices, and poor infant feeding practices also contribute to the problem. Targeted relief programs (e.g., VGF, FFW), on the other hand, appear to have a significant impact in reducing child malnutrition among the poor.</p>	<p>Expansion of behavioral change communication (particularly about infant feeding practices), accompanied with cross-sectoral interventions to improve availability and quality of infrastructure, should be components of a strategy to curb malnutrition. Geographic targeting of nutritional interventions can be highly effective in achieving the largest absolute reductions. Targeted and well-timed assistance through relief programs can help distressed households maintain consumption during periods of stress.</p>

3. INVESTING IN HUMAN CAPITAL: EDUCATION, HEALTH, AND CHILD NUTRITION

3.1 Development of human capital through investments in education, health, and nutrition – long a main pillar of the Government of Bangladesh’s poverty reduction strategy – has strong poverty reducing effects. Progress in this area has come faster than in reducing income poverty to the point that Bangladesh’s Human Development Index doubled during the past two decades (CPD 2001). This chapter presents the salient findings and emerging lessons from recent analysis of the 2000 HIES and CNS and other studies to help inform the poverty reduction strategy being developed by GOB. Sections 3.1 and 3.2, giving an overview of recent progress in educational outcomes and an analysis of the incidence of public and private expenditures, lay out the challenges and priorities in the education sector. Likewise, sections 3.3 and 3.4 examine the role of public and private sector entities in providing access to health care, particularly curative care, immunizations, and reproductive health care for the poor. They also present the findings of incidence analysis of government health expenditures. Section 3.5 focuses on the incidence and determinants of child malnutrition, one of the most critical human development challenges currently facing Bangladesh.

3.1: OVERVIEW OF RECENT PROGRESS IN EDUCATION:

3.2 *Bangladesh’s achievements in education over the past two decades have been impressive*, especially when seen against the backdrop of the performance of other countries in the region (Table 3.1). Bangladesh and Sri Lanka are the only countries in South Asia to have attained gender and urban-rural parity in school enrollments. The government accords such high priority to spending on education that it is the largest single item in the revenue and development budget, and offers substantial demand-side incentives to boost enrollment (food-for-education program, secondary school stipend, etc.). In addition, the country’s extensive non-government institutions have also contributed to delivering education services. Although government spending on primary education more than doubled in real terms between 1991 and 2000, since total public spending in Bangladesh is low, education outlays – at around 2.2 percent of GDP -- remain low relative to other countries in the region (e.g. India 3.7 percent, Sri Lanka 3.4 percent).

Table 3.1. Percentage of Children Currently Enrolled in School

	% Children aged 6-10 years			% Children aged 11-15 years		
	National	Rural	Urban	National	Rural	Urban
Bangladesh	80	80	81	64	63	67
Boys	81	80	81	62	61	67
Girls	80	80	80	66	66	68
India	71	67	86	66	61	81
Boys	76	73	87	73	69	82
Girls	65	60	84	58	50	79
West Bengal	69	67	80	66	62	78
Boys	73	71	83	67	63	80
Girls	65	63	77	64	60	77
Pakistan	61	56	76	55	49	69
Boys	69	65	78	67	64	72
Girls	53	45	74	43	32	67

Source: Bangladesh: 1995-96 HIES; India and West Bengal: 1995-96 NSSO 52nd Round; Pakistan: 1996-97 PIHS

3.3 **Recent, less-encouraging survey-based estimates of progress put official claims in question.** PMED estimates indicate that total enrollment in primary schools increased 47 percent during the past decade – from 12 million in 1990 to 17.5 million in 2000. DPE/PMED data also indicate substantial improvements in rates of enrollment: they show gross enrollment rates (GER) rising from 76 percent in 1991 to 104 percent in 1999-00, with completion rates rising from 40 percent to 65 percent over the same period. However, while comparable survey-based estimates of GER covering the same period are not available, the household survey data in general indicate much more modest improvement in rates of enrollment.

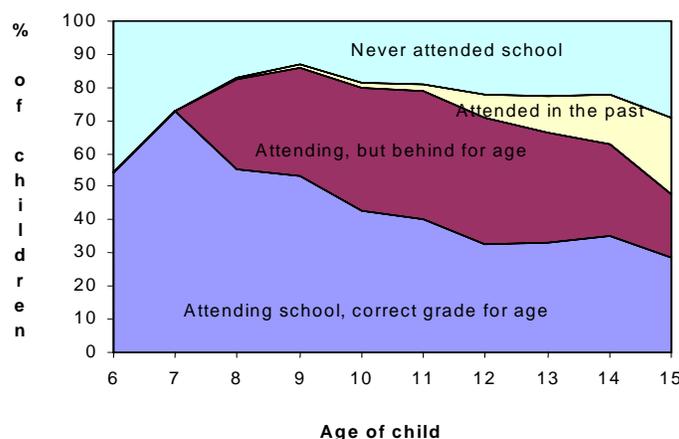
Table 3.2. Percentage of Population 11 – 19 that has completed Grade 5

	HES 1991-92			HIES 2000		
	Overall	Rural	Urban	Overall	Rural	Urban
Overall	44%	41%	62%	56%	54%	63%
Boys	46%	42%	65%	53%	51%	61%
Girls	42%	39%	59%	59%	57%	64%

Source: 2000 HIES

3.4 The HES series report a moderate rise – from 44 percent to 56 percent – between 1991-92 and 2000 in the share of population aged 11-19 years that has completed grade 5 (Table 3.2). Similarly, the Bangladesh Demographic and Health Survey (BDHS) series indicates only a modest decline (from around 25 percent to 19 percent) between 1993-94 and 1999-00 in the proportion of children aged 6-9 years with no education (BDHS, various years).¹ Much more worryingly, results from the 2000 HIES indicate that enrollment rates may have fallen over the past five years (Table 1.7). Estimates based on other independent surveys also confirm that the Ministry records most likely overestimate the rise in enrollments in recent years.

Figure 3.1. School Attendance Profile by Age



Source: 2000 HIES

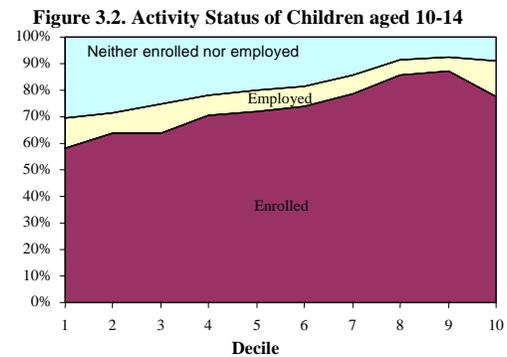
3.5 **Late entry into the schooling system is widespread and potentially curtails enrollment and attainment.** Analyzing school attendance in Bangladesh by single-year age-group

¹ The 2000 HIES indicates that among children aged 6-10 years, one-quarter were not currently enrolled in school. Similarly, the 1999 Education Watch survey, for which 42,500 households were interviewed, also reported that 23 percent of children aged 6-10 years were currently not enrolled in school.

provides some interesting insights into the pattern of school enrollments in the country. Based on data from the 2000 HIES, about ninety percent of children aged 9 years were found to be attending school, but the share was as low as fifty percent amongst those aged 6 years (Figure 3.1). The proportion of children attending school rises steadily with age. However, late entry into the schooling system means that overall roughly one out of four children aged 6-10 years are currently not in school (Table 1.7), and a sizeable fraction of the school-going aged children are enrolled in a grade behind their target-age grade.² Why is enrolment in schools at an early age important? As the data show, retention rates in schools are quite high until age 11, after which the proportion of dropouts rises steadily. Were a child to enroll in school at age 6 (the target age for class one) and leave at the age of 11, he or she would have completed primary education. Understanding whether late entry holds back attainment levels, and finding policy levers to promote on-time entry into schooling merits further research.

3.6 Low enrollments cannot be explained away by child labor, as a large fraction of poor children who are not working never enroll in school.

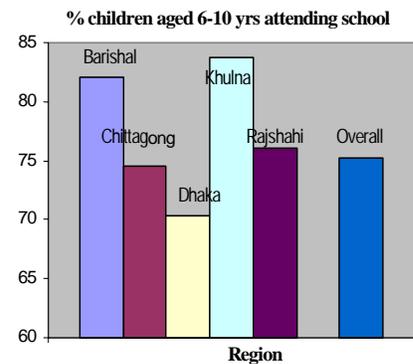
2000 HIES data on the activity status of children shows that the share of 10-14-year-old children who are neither working nor in school is extremely high – about 30 percent – in the poorest expenditure decile (Figure 3.2).³ The two most common responses among the idle 10-14 year-olds as to why they were not available for work were that they were “too young” (24 percent) or that there was “no work available” (44 percent). Understanding why children from poor families are not attending schools, even when they are not in the labor force, should be an urgent priority.



3.7 Part of the answer to this puzzle may lie in the low perceived quality of education.

On the demand side, low education quality and low perceived benefits of education may be keeping some households from enrolling their children. Private expenditures required to send children to primary school do not seem to be a limiting factor: on average, poor households spent between 1 to 2 percent of their total household expenditures on primary school fees and other inputs (Background Paper 6). Besides, incentive stipend programs (such as the FFE) targeted to poor households help defer such costs, and more importantly, also cover the opportunity cost (in terms of foregone wages) of attending school.

3.8 Evidence from other countries shows that even when compulsory schooling laws are not fully enforceable, the mere availability of good schools can do a lot to divert children away from long hours in the work place (Basu, 1999). This might well be true in Bangladesh also: examining variation in enrollment among the 6-10 age group by geographic region using the 2000 HIES



² For the purposes of this analysis, target-age grades were defined very liberally to be grade 1 or higher for 7-year olds, grade 2 or higher for 8-year olds, and so on.

³ Recent evidence suggests that the incidence of child labor has declined during the past decade. According to data from the Labor Force Surveys (based on the ‘usual definition’ of economically active), the number of children between 10-14 years of age who are economically active has declined from 5.6 million in 1995-96 to 4.3 million in 1999-00. The estimates of the total magnitude of child labor vary considerably across different data sources (e.g., comparing figures from the HES, LFS, and National Survey of Child Labor). However, most data sources point to a decline in labor force participation by children during the past decade.

reveals that enrollment was considerably higher in Khulna and Barishal than in other divisions. The Education Watch study (CAMPE 1999), which shows a very similar profile of regional variation in enrollment, offers some clues indicating that variation in quality of education might explain the large observed regional differences in enrollment rates. Findings of Assessments of Basic Competencies (ABC) tests conducted in 1993 and 1998 show that not only did children in rural Khulna and Barishal perform better than children in other divisions in 1998, but also that improvements in test scores over time were also highest in these two divisions (Appendix Table A3.1), indicating that the rise in enrollment may have been induced by improvements in the quality of education. Further research is warranted to better understand the reasons for such large observed regional differences in enrollment and attainment, as laggard regions may have much to learn from the successes of others.

3.9 ***The quality of education provided is a serious concern.*** Getting children to enroll in schools is only part of the challenge, as in the end what matters is whether children get an education that has lasting value. The ABC tests mentioned above found extremely low levels of meaningful learning among students. Despite the increase in funding available for education over the past two decades, governance problems continue to plague the system (CAMPE 1999, 2000). Instruction time (i.e. contact hours) in mainstream state schools – which dominate provision of primary education in Bangladesh – is lowest among the various alternate providers, and although salaries of state-school teachers are considerably higher than those paid in other schools, absenteeism continues to be a big problem. Parents have to pay to obtain textbooks that are supposed to be provided free of charge. Three-quarters of the total resources allocated to the Food-for-Education (FFE) program do not appear to reach any beneficiary.⁴ Although not enough hard evidence exists, it is widely believed that the education students receive in schools in poor areas is of disproportionately poor quality and may be one of the main reasons why children from poor families are much more likely to drop-out.

3.10 A consensus defines the measures needed in the field: (a) raise the amount of public resources devoted to basic education; (b) continue to improve access and equity; (c) establish better partnerships with relevant stakeholders (parents, communities, non-government institutions, etc.) to improve quality of education services; (d) provide adequate teacher training and other needed pedagogical inputs, as well as (e) undertake better assessments of learning and outcomes (CAMPE 1999, GOB 2000, CPD 2001, etc). Further, those involved broadly agree on the need to improve management and accountability, reduce corruption and waste, and de-politicize the education system (e.g. CAMPE 1999, CPD 2001).

3.11 ***Governance is a key constraint on improving the quality of education expenditures.*** A recent survey on governance problems in Bangladesh found growing dissatisfaction among the parents of school children with the quality of education in general and, most acutely with schools at the primary level. Where 22 percent had registered their unhappiness with education standards in a similar survey five years ago, 30 percent took that negative view in the current survey. Underlying the dissatisfaction with publicly funded education were some perceptions of corruption and negligence in the Directorate of Primary Education, general concerns about the influence of wealth on access to schooling and specific complaints about teachers giving private students priority over public ones. Another weakness in the system appears to be the supply of textbooks, especially in rural areas where 67 percent of the households report difficulties in getting textbooks. The main problems cited were delayed supply (39 percent), extra payments (40 percent), and the need to buy textbooks instead of getting them free of cost (17 percent).

⁴ In other words, these resources disappear from the system. For a detailed discussion of leakage from the Food-for-Education program, see chapter 4.

3.12 Governance can be improved in part through decentralization of management at primary and secondary levels. While community involvement in education has increased somewhat, no significant power has yet been devolved to communities or local governments at the primary and secondary level. Many countries are moving toward greater decentralized decision-making to better match expenditures to local needs and to improve local-level accountability through establishing more transparent processes and guidelines, better measures of performance, and better alignment of institutional and individual incentives with performance indicators.⁵

3.13 In recent months, the government has exhibited its commitment to improve governance in the education sector by modifying or reforming poorly governed programs (replacing FFE with a cash stipend program, changing the textbook delivery system, etc.), and embarking on a planning exercise for the second phase of the primary education development initiative. Other policy measures such as striking a more effective balance between expenditures on teaching and non-teaching inputs, completing the revision of the unified curriculum, and expanding the contracting of NGOs for management of non-performing government schools also merit consideration.

3.2: BENEFIT-INCIDENCE ANALYSIS OF EDUCATION EXPENDITURES:

3.14 Data from the 2000 HIES, together with expenditure data from the Ministry of Education, were used to analyze the distribution of GOB subsidies across the population (for details, see Background Paper 6). This section starts with a brief overview of public and private education spending in Bangladesh, followed by the main findings emerging from the analysis.

3.15 Since independence in the early 1970s, public education expenditures have increased from 0.9 percent of GDP to around 2.2 percent. In Bangladesh's centralized system for financing education, the primary instruments are the revenue and development allocations in the national budget. In 1998-99, primary education represented 40 percent of the total revenue budget and 47 percent of development expenditures, with the government primary schools accounting for the bulk of total enrollment at the primary level. Most secondary schools in Bangladesh are privately managed, but depend on the government for financing the majority of their operating and capital expenditures through salary subventions and block grants. Finally, tertiary education is primarily run through government grants, although private participation has increased in recent years. Households in Bangladesh also participate in funding education, contributing respectively 36, 67, and 44 percent of the total resources to the primary, secondary, and tertiary education sectors. However, these averages conceal considerable disparities in spending across the income distribution, with poorer households in Bangladesh accounting for a considerably lower share of total private expenditures on education than their share of total per capita expenditures (Table 3.3).

3.16 ***GOB spending on primary education plays an important re-distributive role in promoting equitable access to basic education.*** As in many other countries, poor children in Bangladesh are less likely to attend school at all levels; however, the narrowest gap is observed in primary education and widens considerably at the secondary and higher secondary levels (Appendix

⁵ While greater decentralization of primary and secondary education in Bangladesh also offers potentially high payoffs in terms of improving quality and access, special attention is warranted on at least two fronts (World Bank 2001g). First, in the face of considerable regional inequalities in resource mobilization potential, while school-level management can effectively be decentralized, local financing cannot be the exclusive source of educational support. Government action may still be needed at the national or regional level in providing resources, setting standards, developing curricula and assessing learning. Second, relying on decentralization to improve the management of education presupposes that families and communities will be sufficiently empowered to participate effectively, to influence policy formulation through democratic processes, and to prevent elite capture and corruption.

Table A3.2). At the primary level, boys' and girls' enrollment rates are quite similar, but the pattern of girls' overtaking boys at the junior secondary level strongly suggests the influence of the Female Secondary Stipend (FSS) program. Girls' enrollment is higher than boys' at the secondary level in both urban and rural areas and in all income groups except the richest quintile.

Table 3.3. Distribution of Public and Private Expenditures on Education

	By quintile					By poverty status		Total
	1 (lowest)	2	3	4	5 (highest)	Poor	Non-poor	
Per-capita expenditure	8	12	16	22	42	26	74	100%
Private education spending	3	7	12	25	52	15	86	100%
Public education spending	12	15	17	23	32	35	65	100%
Primary education	22	23	22	19	14	56	44	100%
Secondary	6	11	16	28	40	24	76	100%
Tertiary	6	6	10	21	57	17	83	100%
Food For Education *								
Wheat	35	29	17	14	5	67	33	100%
Rice	30	36	12	17	6	72	20	100%
Female Secondary Stipend	7	14	19	29	32	30	70	100%

* recent estimates show that only 25 percent of all FFE allocations reach any household

3.17 Combining information on enrollment from the HIES with the estimated per-pupil government subsidy shows that public spending on primary education plays an important redistributive role. The poor receive 56 percent of government expenditures on primary education, an amount greater than their share of the population (50 percent). The distribution of public primary school spending is thus strongly pro-poor, especially when contrasted with the distribution of private expenditures on education where the bottom half of the population that is below the poverty line accounts for only 15 percent of total private spending on education (Table 3.3).

3.18 In theory, the amount of subsidy accruing to a sub-group depends on the number of potential users, the rate of use among the users, and the level of per-user subsidy. In the case of primary education, the number of potential users is largely determined by the demographic composition and, more specifically, by the number of children. 27 percent of all children 6-10 years old belong to the poorest 20 percent of the population, while only 12 percent belong to the richest 20 percent. Overall, 3 out of 5 children in this age group come from poor households. The rate of use (enrollment rate) is lower among the poor, and per-student subsidies are roughly comparable across income groups. Thus, the key factor driving the pro-poor distribution of primary education is the age composition, which more than offsets the lower enrollment rates among the poor.

3.19 Total spending on education (i.e. aggregated at all levels) is skewed toward the relatively better-off. What are the benchmarks against which to judge this performance in reaching the poor in education? One possibility is to compare targeting outcomes in Bangladesh with outcomes in other countries. In this regard, targeting of primary and other education spending in Bangladesh is quite comparable with that in other countries with similar levels of per capita income (Appendix Table A3.3).

3.20 ***Bangladesh needs to address the pro-rich bias of public expenditures at the post-primary level and accord priority to quality improvements at both the primary and secondary levels.*** As Table 3.3 shows, the pro-poor bias is reversed at the secondary and tertiary levels. In their progression through the education system, students are screened out not just on the basis of merit

but also because of their inability to bear the rising costs of education at higher levels. A mechanism linking the public financing of post-primary education to both efficiency and equity criteria needs to be designed and enforced.

3.21 Moreover, given the scarcity of total funds available for education, public spending needs to be concentrated in areas where market failure is pervasive and where positive spillovers are largest. GOB has recently announced its plans to extend the length of compulsory primary education from five to eight years. Rather than over-stretch its skimpy resources by expanding its role as provider of education services, GOB should focus on improving *quality* of services provided at the primary and secondary levels and, at the same time, continue to focus on maintaining *coverage* at the primary school level.⁶

3.22 ***Demand-side incentives that are important in attracting children to school are not necessarily successful in reaching the poor.*** Currently, two demand-side conditional transfer programs provide subsidies to selected schools and direct benefits to selected groups of students and their families. The Female Secondary School Stipend (FSS) program provides cash stipends and tuition waivers to girls residing in non-municipal areas if they attend grades VI-X. The Food-for-Education (FFE) program provides grain rations to disadvantaged families if they send their children to primary school.⁷ While no formal evaluations of the effectiveness of the FSS have been carried out, it is widely believed to have improved secondary school enrollments to the point, noted above, that girls' secondary enrollment matches or exceeds that of boys for all but the wealthiest 20 percent of the population (Appendix Table A3.2). Strong evidence from the mid-nineties shows that the FFE program has also been successful in attracting poor children to primary school (Ravallion and Wodon, 2000). Estimates suggest that the program increased the probability of going to school by a little over 20 percent for both boys and girls. Preliminary investigation of the 2000 HIES shows that these gains have been sustained.

3.23 Nonetheless, implementation problems appear to be seriously undermining these programs' effectiveness. Most disturbing are estimates of aggregate transfers made to households for the FFE and FSS programs obtained from the 2000 HIES. When compared with administrative records of resource transfers, the estimates indicate that a large portion of the aggregate program allocation (particularly in FFE) does not reach any of the potential beneficiaries. What is worrisome is that similar calculations for the FFE program using the 1995-96 HES indicate substantially lower discrepancy, indicating that problems of leakage have worsened over time. This flaw aside, the FFE appears to be well-targeted: poorer households receive a higher proportion of grain transfers as compared to the relatively better off,⁸ while the non-poor are more likely to benefit from the FSS (Table 3.3).

3.24 It is important to note that these incentive program come at a considerable price – i.e. they divert precious resources that could potentially be applied instead to improve the quality of education provided.⁹ No magic formula can determine the optimal mix between spending on incentives vs. other quality-enhancing education inputs; indeed, the apparent trade-off between the two is a false

⁶ While GOB has been successful in directing a relatively high share of total spending on education toward basic education, during the past decade, there has been a significant shift within basic education from the primary to secondary level. Primary education's share of the recurrent education budget decreasing from 48.5 percent in 1991-92 to 39.5 percent in 1999-00, while secondary education's share rose from 36.8 to 48.4 percent during the same period (Knowles, 2001).

⁷ From July 2002, FFE will also be converted to a cash stipend program.

⁸ However, it is important to note that if leakage of resources from the FFE is taken into account, this could potentially reverse the finding of the pro-poor incidence. High leakage from the FFE is discussed in more detail in Chapter 4.

⁹ For instance, 30 percent of ADP budget for primary education is taken up by the Food for Education program.

one, as ultimately children will enroll in school only if parents perceive the education imparted to have value. To have maximum possible impact, incentive programs should in general have explicit and easily measurable development objectives and should be targeted to intended beneficiaries. For example, if the objective of the female secondary stipend program is both to achieve gender parity as well as raise secondary school enrollment, then program resources should concentrate on regions where the largest gender gaps exist and where enrollments are lagging. As gender parity has been largely achieved, it is time to consider providing incentives to both boys and girls from disadvantaged backgrounds, rather than to all girls. Resources for stipends to poor boys in secondary schools could be made available through better targeting of the female stipends program (employing easily observable and verifiable criteria) such that re-directing the stipend to boys from poor families does not require additional budgetary allocations. Similar considerations apply to primary school enrollment in urban slums (for both boys and girls), where a number of recent studies have highlighted extremely low rates of school attendance.

3.3: OVERVIEW OF RECENT PROGRESS IN HEALTH:

3.25 Bangladesh has made great strides in improving the health of its people. Along with impressive gains in child immunization rates during the 1990s, life expectancy, infant mortality, and access to safe water have also improved considerably. The population growth rate has fallen from 3 percent in the 1970s to 1.5 percent in the late 1990s, and the total fertility rate has also declined to around 3.3. At the same time, considerable public health challenges remain. Maternal mortality and child malnutrition rates are high, some infectious diseases persist, and the share of injuries and non-communicable diseases is projected to increase, placing new challenges on the health system. Also, some disparities in access to health care services still separate the poor and non-poor (Table 3.4):

Table 3.4. Patterns of Self-Reported Morbidity and Health Care Use

	Urban		Rural		All	
	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor
% individuals reported being sick	20.4	17.5	20.5	23.7	20.9	21.3
% of sick who sought medical care	72.1	84.0	72.2	83.1	72.2	83.3
% of sick (6-10 yrs) who sought care	67.2	85.6	67.6	81.9	67.2	82.6

Source: 2000 HIES

3.26 The health system in Bangladesh comprises a range of public and private sector health care providers. The government health system is organized in 4 tiers: medical college hospitals, district hospitals, thana health complexes, and union health and family welfare centers. Private sector providers include NGOs and other non-profit entities, traditional and homeopathic providers, qualified pharmacists and unlicensed drug sellers, qualified and unqualified modern care providers, and government doctors engaging in private practice. In terms of total value of health services from all sources,¹⁰ drug retailers accounted for the largest market share in 1997 (46 percent), followed by the public sector with a 29-percent market share. Private modern qualified providers accounted for 6 percent of total health services, while other providers (traditional, unqualified, etc.) accounted for the balance (World Bank 2001f). NGOs accounted for a small share (3 percent) of the health service delivery by value, but they have played an important role in providing health promotion services, with major successes in the areas of contraceptive use, promotion of oral rehydration therapy for diarrhea, and nutrition.

¹⁰ Value of health services for each provider as measured by payments made by patients or by the government on their behalf.

GOB is the main provider for prenatal health care and immunizations, while pharmacies and private providers are the main providers for curative care.

3.27 Maternal Health-Care: Maternal mortality, estimated at 392 deaths per 100,000, is a serious concern for Bangladesh. There have been improvements in reproductive health services, especially related to prenatal care, and the proportion of women seeking prenatal consultations has been rising steadily. For births that took place in 1999, two-thirds of all women visited a health practitioner for a consultation compared to only about one-third in 1991. Prenatal care is most commonly sought in satellite clinics and other facilities at the thana-level or lower, except for the relatively well-off in urban areas who prefer private clinics (Table 3.5). By contrast, the use of post-natal care has increased much more slowly and is still fairly low.¹¹ The government is again the main provider in rural areas and for the urban poor. Over 90 percent of all deliveries in Bangladesh take place in the home. Only among the urban non-poor is the share of institutional deliveries non-negligible.

Table 3.5. Choice of Provider for Peri-natal Services

% of visits to different providers, among all ever married women:	Urban		Rural		All	
	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor
Pre-natal Care						
Government facility, thana-level or lower	77	50	87	80	86	71
District hospital, medical college	11	15	3	5	4	8
Private, NGO, Other	12	35	10	15	10	21
Deliveries						
Home	95	82	98	96	98	92
Government facility, thana-level or lower	2	3	1.5	2	1.4	2
District hospital, medical college	2	7	0.4	1	0.6	3
Private, NGO, Other	1	8	0.3	1	0.5	3
Post-natal Care						
Home	9	5	14	13	13	10
Government facility, thana-level or lower	52	27	61	54	59	44
District hospital, medical college	18	22	4	10	7	14
Private, NGO, Other	21	46	21	23	21	32

Source. 2000 HIES

3.28 Immunization Services: Child immunization rates have not yet reached universal coverage in Bangladesh. However, considerable progress has occurred in this area – over 90 percent of children below 5 years have received at least 1 major vaccine, and disparities between urban and rural areas, or by income level are not very large (Table 3.6). The public sector is playing an important role with 90 percent of all immunizations provided in a government facility or by a government health worker. In urban areas, the non-poor tend to use government facilities above the thana-level more than the poor for immunization services, but also purchase more services from the private health care market. In rural areas patterns of demand are quite similar across income groups: 2 out of 3 immunizations in rural areas take place in facilities below the *thana* level. Government health workers conducted 14 and 11 percent of immunizations of poor and non-poor children respectively.

¹¹ The proportion of women seeking a post-natal consultation increased from 11 percent in 1991 to 15 percent in 1999.

Table 3.6. Choice of Provider for Immunization Services

	Urban		Rural		All	
	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor
% children received all vaccines	65	81	63	66	64	69
% children received at least 1 vaccine	92	97	92	94	92	95
% immunizations from different sources:*						
Government facility, thana-level or lower	77	71	82	84	81	81
Government health worker	14	11	14	11	14	11
District hospital	3	7	0	1	1	3
NGO health center or worker	5	6	2	2	2	2
Private, Other	2	6	2	2	2	3

Notes: *Visits to a given provider as % of total number of visits. Sample includes all children under 5 years who received at least 1 immunization. Source: 2000 HIES, World Bank staff estimates

3.29 Curative care: Unlike maternal health-care and immunizations, both the poor and non-poor much more commonly use private services for curative care than government facilities. Pharmacies are the most commonly visited health-care providers (Table 3.7), especially in rural areas and particularly for the poor. Private formal sector providers are next in order of importance. Government services are important, but more so in the form of fee-based consultations that take place in private rather than public clinics. This worrisome finding suggests that doctors have weak incentives to increase their productivity in government work when they can earn more by also selling their services to private clients. Moreover, if, as is likely, these government employed doctors treat private patients during official hours of work, then they are misappropriating part of the government health subsidy intended for the public.

Table 3.7. Choice of Provider for Curative Care

% of visits to different providers, among those who sought curative care:	Urban		Rural		All	
	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor
Government Facility	16	11	8	12	9	12
Government doctor in private practice	14	29	9	19	10	21
Private Formal	20	24	25	24	24	24
Pharmacy/Drug-sellers	39	28	45	35	44	33
Private informal, NGO, Other	11	8	13	10	13	10

Source: 2000 HIES

3.30 Targeting of the poor with prenatal care and immunization services has been successful. However, the impact of government-provided health services, other than immunizations, is well below potential on account of extremely low utilization rates. An encouraging finding is that the targeting of the poor with prenatal care and immunization services has been so successful that the poor are just as likely as the non-poor to use both services. However, the impact of government-provided health services is limited because of low utilization rates for most services. On average, only 2 percent of urban and 1.7 percent of rural residents visited government providers for curative care in the 30 days preceding the survey (Table 3.8). In urban areas, the poor tend to use government facilities more frequently than the non-poor; the opposite is true in rural areas. As noted earlier, the efficiency of government services is also limited because government doctors have private practices. The utilization rates of government doctors in private practice, particularly by the non-poor, exceed the rate at which public health facilities are used.

Table 3.8. Utilization Rates of Government Health Care Services

% of individuals seeking care from:	Urban		Rural		All	
	Poor	Non-poor	Poor	Non-poor	Poor	Non-poor
Curative Care						
Health facilities	2.4	1.8	1.2	2.3	1.4	2.1
Government doctors in private practices	2.1	4.3	1.4	3.8	1.5	3.9
Maternal Health*						
Pre-natal services	30.4	28.9	30.6	28.1	30.6	28.3
Deliveries	3.1	9.1	1.7	2.8	1.9	4.4
Post-natal services	5.1	8.1	4.2	5.8	4.3	6.4
Immunizations**						
Government facility or worker	87.4	88.0	88.7	91.3	88.6	90.5

Notes: *Percentage of sample of ever married women. ** Percentage of sample of children below 5 years old

Source: 2000 HIES, World Bank staff estimates

3.31 **Accessibility of health facilities in Bangladesh has improved in recent years.** Data from the rural community questionnaires in the 1995-96 and 2000 HES were used to assess changes in the accessibility of health infrastructure. Not all categories are comparable across the two surveys, though the ones that are do suggest improvements in regard to various health facilities. For example, the average distance to a satellite clinic decreased from 9.9 to 8.0 km. between 1995-96 and 2000, when accessibility of private health care service providers also improved significantly (Table 3.9). Pharmacies – the most commonly used health facilities – were also found to be the most accessible. However, while community-level data on average distance to health facilities was not collected in urban areas, data from the household survey module indicate that users of government facilities in rural areas on average travel and wait 1.5 times longer than their urban counterparts. Rural residents continue to be comparatively disadvantaged in access to health facilities, though the differential appears to be considerably lower than in many other countries.

Table 3.9. Average Distance to Health Facilities: 1995-96 and 2000

1995-96 HES	Mean Distance (kilometers)	2000 HIES	Mean Distance (kilometers)
Satellite clinic	9.9	Satellite clinic	8.0
Government hospital	11.6	Govt. district hospital	30.0
		Thana health complex	10.8
Maternity & child health center	16.2	Union health & family welfare center	6.4
Family planning clinic	5.1		
Rural health center	4.7		
Immunization center	4.7	Immunization center	3.3
Private hospital	30.7	Private hospital, clinic	18.3
Private clinic	24.7		
Private doctor	7.4	Doctor's chamber	6.7
Pharmacy	2.6	Medicine shop, dispensary	2.6
NGO primary health care center	16.7	NGO clinic, health center	16.8

Source: 1995-96 HES and 2000 HIES rural community sample.

3.4: BENEFIT-INCIDENCE ANALYSIS OF HEALTH EXPENDITURES:

3.32 **Public health expenditures play a re-distributive role. Outlays on child care, family planning and control of communicable diseases, and prenatal care benefit the poor the most.**

Benefit incidence analysis shows that the share of public health expenditures accruing to the poor is an estimated 45 percent, while their share of the population is 50 percent, and their share of overall income is 26 percent (Table 3.10). Such a distribution of health expenditures reduces inequality and

adds more to the welfare of the poor. In fact, the health subsidy represents 1.45 percent of the average per capita expenditures of the poor and 0.8 percent of the non-poor. Also, public health expenditures are more equitably distributed than public spending on education. Of all categories of health expenditures considered in this report, spending on child health as part of the Essential Services Package (ESP) is the most strongly pro-poor in large part because poor households tend to have more children. By contrast, allocations to limited curative care show the most unequal distribution, with the poorest 20 percent of the population having considerably lower access to the subsidy compared to the rest of the population.

3.33 Compared to the rural poor, the poor in urban areas command a slightly higher proportion of the overall health subsidies, but there is an important caveat. The very poor (i.e. the lowest 20 percent of the urban population) command a smaller share of sector-specific subsidies relative to their rural counterparts (Appendix Table A3.4) and appear to be systematically excluded from access to government health subsidies. This pattern is driven by the poorest 20 percent in urban areas having considerably less access to government subsidies for curative care.

Table 3.10. Distribution of Public and Private Expenditures on Health

	By quintile					By poverty status		Total
	1 (lowest)	2	3	4	5 (highest)	Poor	Non-poor	
Per-capita expenditure	8	12	16	22	42	26	74	100%
Private medical costs (curative visits)	7	8	15	18	52	20	80	100%
Public education spending	12	15	17	23	32	35	65	100%
Public health spending	16	19	21	18	26	45	55	100%
Family planning and control of communicable diseases	18	18	19	19	24	46	54	100%
Limited curative care	11	21	22	18	28	42	58	100%
Maternal health	20	13	20	18	29	44	57	100%
Child health	23	21	19	18	18	54	46	100%

Source: 2000 HIES

3.34 One reason that poor households' share of public health subsidies is not greater may be related to the fees required for service. Fees charged in government facilities do not represent a large burden for poor households, but informal fees required in the same facilities are comparable to or even higher than the official ones. A second reason may be related to government doctors' conducting a private practice in which they charge fees substantially above those for services in other types of facilities, including private. If these private consultations take place during official work hours, or if public equipment and supplies are diverted for private practice, access of the poor to public health care expenditures is naturally reduced.

3.35 As in the case of education, comparing distributions of health spending in Bangladesh with those in other countries provides a benchmark for judging program success (Appendix Table A3.5). Bangladesh has a more pro-poor distribution than Ghana, which shows a highly inequitable distribution, and Vietnam, which shows subsidies to both inpatient and outpatient care favoring wealthier groups. However, Bangladesh lags behind Malaysia, where inpatient public services were accessible to the poor as early as 1984. The country does better than India in reaching the low-income population with health subsidies for curative care. An important caveat, though, is that Bangladesh, like its neighbor, has limited success in reaching the poorest of the poor with curative care subsidies—only 11 percent of which in all accrue to the poorest fifth of the population.

3.36 ***Priority areas for improving health outcomes for the poor include (a) access to health care for the urban poor, (b) quality of private sector providers, (c) quality of curative care in government facilities, and (d) behavioral change communication for better maternal health.***¹²

Given the capacity and resource constraints in the public sector, GOB should do more to involve non-government institutions and grass-root organizations by contracting out provision of services for the hard-to-reach urban poor. Self-regulation and strengthening consumer voice by setting up consumer councils at the national and regional levels may be an effective approach for improving the quality of care provided by the private sector. In the public sector, although accessibility (in terms of distance from health facilities) has improved, waiting times are still long and people still choose not to use government facilities. Options such as introducing a more appropriate incentives regime for staff and extending the current experience gained from contracting out management to NGOs should be considered. To improve maternal health, wider educational efforts in favor of behavioral change (contraception, hygiene, institutional delivery) and the need for post-natal care, among others, are likely to have high payoffs.

3.5: CHILD MALNUTRITION:

3.37 600 to 700 children die of malnutrition-related causes in Bangladesh every day. The social and economic consequences of malnutrition are profound, resulting in human misery, lost productivity and reduced intellectual and learning capacity. It impairs learning and cognitive development, thereby affecting schooling performance and completion. Given the high pecuniary returns to schooling in developing countries, low educational attainment perpetuates poverty by preventing the poor from increasing their earnings and income. Recent research has shown that stunting also has a direct negative effect on labor productivity and individual earnings. Malnutrition increases the risk of infections in a child that further slow body growth, trapping the young in a vicious cycle of malnutrition and illness, and exacts a heavy costs on the health care system.¹³

3.38 ***Malnutrition rates in Bangladesh are very high, but considerable progress has been made on this front in recent years.***

Child malnutrition rates in Bangladesh are extraordinarily high.¹⁴ The two most recent surveys – the Child Nutrition Survey 2000 and the Demographic and Health Survey 1999-2000 – indicate that nearly one-half of children below the age of 6 years are underweight or stunted (Figure 3.3).^{15,16} Nearly 13-19 percent of children are severely underweight or stunted in the sense of being more than three standard deviations below the relevant NCHS standards. This suggests that children in Bangladesh suffer from short-term, acute food deficits (as reflected in low weight-for-age) as well as from longer-term, chronic under-nutrition (as manifested in high rates of stunting).¹⁷ The levels of

¹² The Public Expenditure Review (World Bank, 2002a) identifies three main problem areas – implementation of the Health and Population Sector Program, efficiency of the public sector, and the role of the private sector -- that have a bearing on how well the system can serve the population, including the poor. For a discussion of the policy priorities in the sector more broadly, see PER, 2002.

¹³ A recent World Bank nutrition sector paper, Bangladesh: Breaking the Malnutrition Barrier, estimated the current cost of malnutrition at \$1 billion annually.

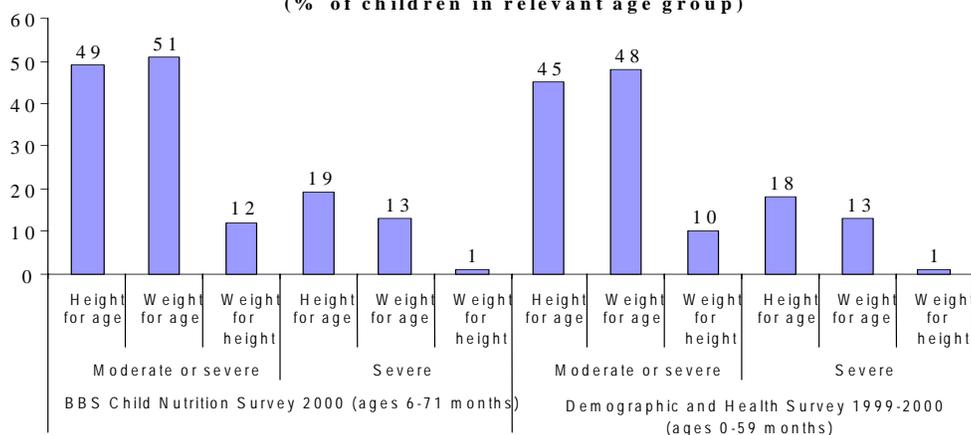
¹⁴ For a more detailed discussion of child malnutrition and poverty in Bangladesh, see Background Paper 7.

¹⁵ As in the literature, a child is considered underweight when his or her weight-for-age is more than two standard deviations below the NCHS reference weight. A child is stunted when his or her height-for-age is more than two standard deviations below the NCHS reference. Severe underweight and stunting occur when the relevant nutrition indicator is more than three standard deviations below the NCHS reference.

¹⁶ Note that not only were the CNS and DHS surveys conducted during slightly different periods, but the age groups of children covered by the two surveys were also somewhat different (see Figure 3.3).

¹⁷ Wasting rates (i.e., low weight-for-height) are significantly lower than underweight or stunting rates, but this is typically the case in most low-income countries.

Figure 3.3: Child malnutrition rates, 1999-2000
(% of children in relevant age group)



child malnutrition in Bangladesh are among the highest in the world. During the period 1995-2000, Bangladesh ranked second (after North Korea) in terms of the proportion of underweight children aged 0-5 years and fourth in terms of the proportion of stunted children (after North Korea, Bhutan and Cambodia) (UNDP, 2001). Bangladesh also had the second-highest percentage of infants with low birth weight (i.e., less than 2,500 gm) in the world (after India) (UNDP, 2001). While Bangladesh's child malnutrition problem is more severe than that of most developing countries, including those in sub-Saharan Africa, rates of child malnutrition are not necessarily overly high in comparison to other South Asian countries (Appendix Table A3.6).

3.39 In addition, the country has made impressive gains in reducing these rates during the last 15 years. The decline in rates of underweight and stunted children has been especially steep since the early 1990s (Figure 3.4). For instance, between 1992 and 2000, stunting rates dropped from 64 percent to 49 percent, implying an annual decline of 3.3 percent. The wasting rate fell even faster – from 17 percent in 1992 to 12 percent in 2000, equivalent to an annual decline of 4.3 percent. These rates of decline are also confirmed by the two DHS surveys conducted in Bangladesh in the second half of the 1990s. For instance, underweight rates for children aged 0-59 months fell from 56 percent in 1996-97 to 48 percent in 1999-2000, and stunting rates fell even more (Appendix Table A3.7).

Figure 3.4: Malnutrition rates (%) among children aged 6-71 months, 1985-2000

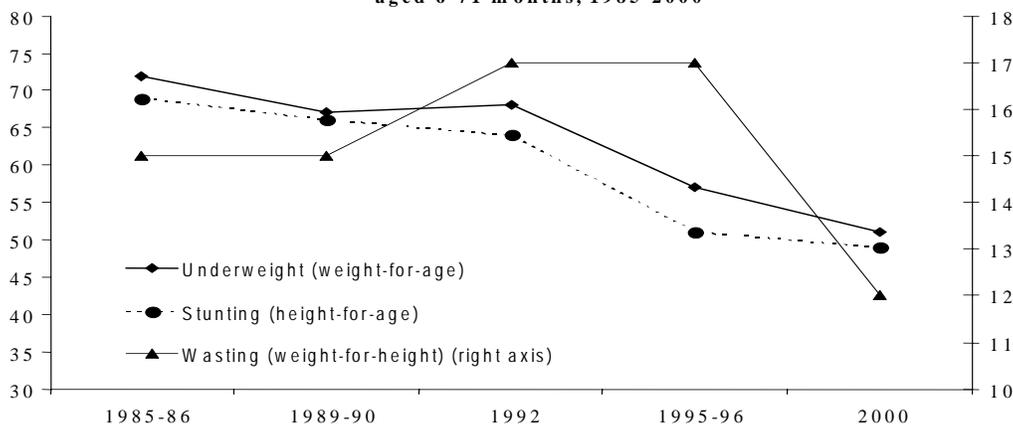
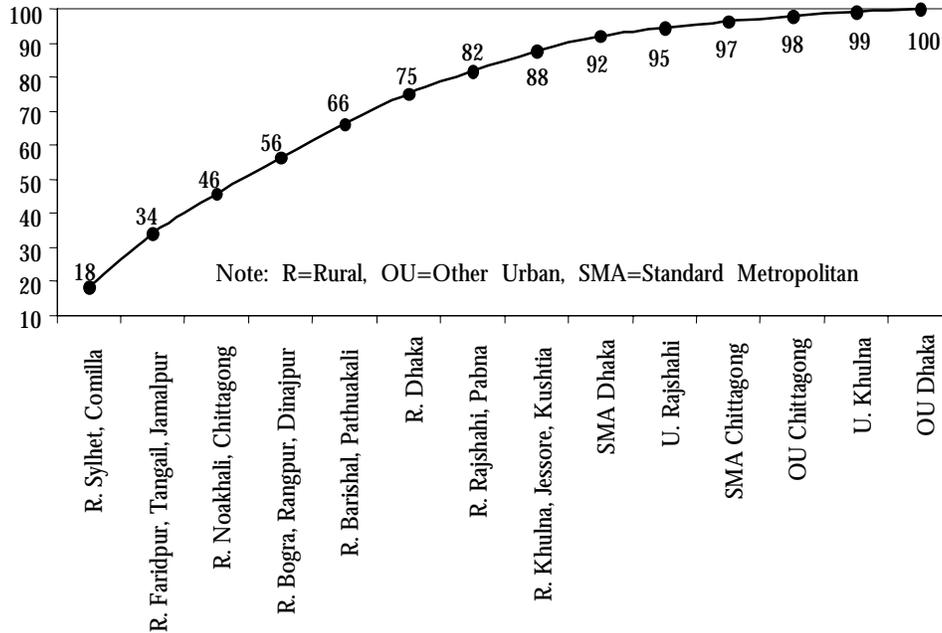


Figure 3.5: Cumulative contribution (%) of different areas to number of severely stunted children in Bangladesh,

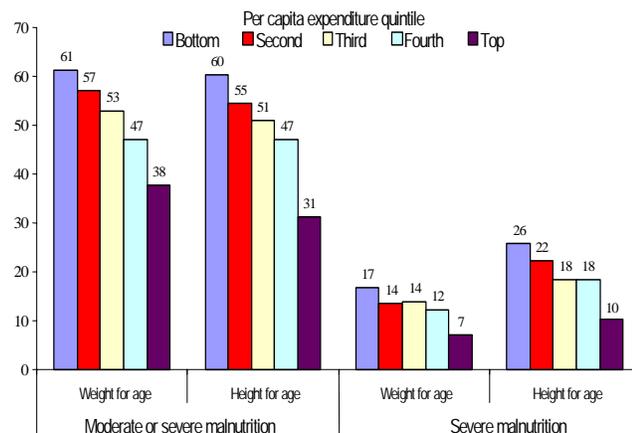


3.40 Incidence of malnutrition in Bangladesh is geographically concentrated. Malnutrition rates in Bangladesh vary significantly according to residence, with children in rural areas (especially girls) having a higher incidence of malnutrition than urban children. In addition, reflecting the strong regional dimension of the problem, the rural districts of Sylhet, Comilla, Faridpur, Tangail, Jamalpur, Noakhali and Chittagong account for nearly one-half of all severely stunted children in the country (Figure 3.5). By contrast, the lowest rates of child malnutrition are found in the urban areas of Dhaka and Khulna division – roughly half the levels in rural Barishal and Pathuakali. The regional concentration of malnutrition means that geographical targeting of nutritional interventions can have high payoffs for achieving the largest absolute reduction in child malnutrition.

While child malnutrition in Bangladesh is strongly linked with income levels, low income is only one of many explanatory factors.

3.41 There are large differences in child malnutrition rates across economic groups, reflecting the fact that household living standards are an important determinant of child nutritional status. Child malnutrition is very pervasive among the poor, with more than 60 percent of the children aged 6-71 months belonging to the bottom consumption quintile being stunted -- more than a quarter severely so (Figure 3.6). Low incomes result in lower purchasing power for food, so the strong association between nutritional status and incomes is to be expected, given that the quantity, quality, and distribution of food intake has an important bearing on nutrition. At the same time, the fact that nearly a third of the richest 20 percent of children in the country – a group that is likely to have good economic access to food – are

Figure 3.6: Child malnutrition rates (%) by per capita expenditure quintile, ages 6-71 months, 2000



malnourished suggests that other factors also play an important role in determining the nutritional status of children.

3.42 Behavioral change communication in Bangladesh has an extremely important role to play in reducing malnutrition. Probably the most important determinant of child nutritional status is nutrient intake, which in turn depends on the nature and duration of feeding (including breastfeeding) practices. Feeding practices are especially critical during the first few days and months of an infant's life when growth is faster and protection against illnesses and infections is most needed. The fact that a large proportion of Bangladeshi mothers wait for several hours or even more than a day after a baby is born to initiate breastfeeding is thus detrimental to the nutritional well-being of the child. The delay in breastfeeding may be related to an incorrect perception that the first breast milk (colostrum) is an inferior food. In fact, colostrum is rich in antibodies and highly beneficial to new-borns. The CNS 2000, however, indicates that only about 18 percent of children receive mother's milk or colostrum as their first food (upon birth). Nearly two-thirds of children are fed sugar, *misri* water or honey as their first food, while another 8 percent receive cow/goat milk or infant formula. About 3 percent of infants are fed mustard oil as their first food.

3.43 Another common and harmful feeding practice is the early termination of exclusive breastfeeding and introduction of supplementary feeding. One reason why mothers give up exclusive breastfeeding early is their perception that they are producing insufficient quantities of milk, in part because of their poor nutrition and heavy workload. Premature introduction of supplemental foods puts the infant at greater risk of malnutrition, since weaning diets are often inadequate in Bangladesh, as in other developing countries. Supplementary feeding begins with a thin gruel of rice, often heavily diluted with water and with some vegetables or legumes added as a relish depending on season and availability, but generally in very small quantities. The consequent low energy density of this weaning food leads to a reduced intake of calories and protein, and is an important cause of growth faltering during the weaning period, from six months to two years of age. The CNS 2000 suggests that supplementary feeding is introduced within the first four months of birth for 36 percent of children and within the first 6 months for 91 percent of children, a pattern contradicted by WHO and UNICEF recommendations that exclusive breastfeeding continue for the first six months.

Table 3.11: Malnutrition Rates by Infant Feeding Practices

Malnutrition indicator (Children aged 6-23 months)		First food at birth was:		Age at which supplementary feeding was introduced:	
		Colostrum, breast milk	Other milk, sugar, honey, mustard oil	4 months or younger	5 months or older
Moderate or severe	Underweight	41.1	50.9	52.9	47.4
	Stunting	35.5	46.8	51.8	41.0
Severe	Underweight	9.1	13.7	15.1	11.8
	Stunting	9.1	16.5	16.7	14.5

Source: 2000 CNS 2000

3.44 The CNS provides very clear evidence that the provision of foods other than colostrum or breast milk as a first food, as well as the early introduction of supplementary feeding, significantly increase the risk of subsequent malnutrition in the child. The incidence of severe underweight and stunting is 50 percent and 80 percent greater, respectively, among infants whose first food immediately after birth was cow's milk, sugar, honey or mustard oil than among infants whose first food was colostrum or breast milk (Table 3.11). Likewise, rates of malnutrition and severe malnutrition are significantly greater among children aged 6-23 months who were started on

supplementary feeding (in addition to breast-feeding) at ages 4 months or younger relative to those whose supplementary feeding began at 5 months or later.

3.45 The importance of non-income factors for changing infant feeding practices is apparent when comparing practices across the income distribution and other factors such as mother's education. Comparing feeding practices across consumption quintiles shows that children from higher quintiles are more likely than the lower quintiles to have received colostrum and breast milk as first foods, and to have been introduced to supplementary feeding after four months. However, even in the richest 20 percent of the population, 31 percent of infants are introduced to supplementary feeding too early, and 74 percent get something other than breast milk as their first food. There is thus a need for continuing a strategy to curb child malnutrition – as envisioned in the Bangladesh Integrated Nutrition Program (Box 3.1) – through greater attention to communicating better nutritional practices and integrating nutrition education to mothers and care-givers.

Box 3.1. Bangladesh Integrated Nutrition Program (BINP)

The BINP is a large coordinated effort Bangladesh launched in 1995 by GOB to address the problem of high levels of child malnutrition. Under the community-based nutrition component, a large number of female community nutrition promoters (CNPs) are employed to undertake growth monitoring and promotion among children, nutritional support for pregnant and lactating women, behavior change communication about nutrition and related issues for the whole community, and supplementary feeding for severely malnourished or growth faltering children as well as pregnant and lactating women. Services are provided through 9,000 community nutrition centers donated and managed by village committees and 14 nongovernmental organizations contracted by the government to mobilize communities and deliver services.

In 1998, a World Bank team reviewing project progress noted that severe malnutrition among under-twos had declined from the baseline figure of 13 percent to 2 percent. Also, the number of low birth weight babies decreased by 30 percent, and there had been an improvement in weight gain by at least half of pregnant women in project areas. The success of BINP, undertaken in a large but limited area, has demonstrated that community mobilization and community-based nutrition services delivered with the help of NGOs can bring rapid, sustainable reductions in severe malnutrition among children and deliver targeted food and micronutrient supplements to reproductive age women suffering chronic energy and micronutrient deficiency.

3.46 The CNS data show an even sharper decline in the incidence of child malnutrition, especially severe malnutrition, with mother's education (Table 3.12). Children of mothers with no schooling are two to three times more likely to experience severe malnutrition than the offspring of mothers with more than 8 years of schooling. The marital status of mothers can affect child nutrition largely through a resource effect, since married women are more likely than widowed or divorced women to enjoy higher levels of household income. The CNS data do show that children of mothers who are widowed, divorced or separated from their husbands are somewhat more likely to be malnourished than children of mothers who are currently married, although the difference is not overly large.¹⁸

Table 3.12: Malnutrition Rates by Mother's Education, Marital and Work Status

Maternal characteristic		Children Aged 6-23 months			
		Moderate or severe		Severe	
		Underweight	Stunting	Underweight	Stunting
Mother's years of schooling	None	57.5	55.7	15.6	23.6
	1-5 years	48.7	44.9	10.6	16.3
	6-8 years	40.6	35.7	4.8	9.0
	>8 years	27.1	25.6	5.3	6.5
Mother's current marital status	Married	51.0	48.6	12.6	19.0
	Widowed, separated or divorced	54.9	57.8	14.4	20.5

Source: 2000 CNS 2000

¹⁸ Interestingly, no clear relationship emerged from the analysis between child malnutrition and either women's work status or decision-making autonomy (as proxied by who makes the decision on what, if any, treatment to obtain for a sick child).

3.47 The CNS 2000 data suggest more widespread child malnutrition, especially severe malnutrition, in villages where the price of coarse rice is higher. Other research has shown that frequent and large fluctuations in rice prices are likely to be even more important than high price levels in depressing child nutrition levels (Foster 1995). While improved infrastructure and food availability in Bangladesh have led to lower variation in the price of main food grains, the HIES 2000 data reveal non-trivial variation in the price of coarse rice across sample villages.¹⁹ Further improvements in infrastructure and transport of goods that leads to better market integration are likely to help improve children's nutritional status.

3.48 ***Access to safe water and sanitation, health facilities, and quality of village infrastructure are important factors explaining variation in nutritional status.*** Contamination caused by unsafe drinking water and lack of sanitation are important causes of diarrhea and other infections in developing countries. These infections, when they affect a child repeatedly, can cause malnutrition. The CNS data indicate a strong association between rates of such malnutrition and household sources of drinking water (Appendix Table A3.8). In general, tap water is observed to be the 'safest' water source, followed by water from wells and water obtained from ponds and rivers. Indeed, children who obtain their drinking water primarily from ponds or rivers are more than two times as likely to be malnourished and even severely malnourished as children who obtain their drinking water from taps. For the same reasons discussed above, the type of toilet in a home can also have a bearing on child malnutrition rates. The CNS data suggest that flush or sanitary toilets, followed by pit latrines, offer the best protection. As would be expected, the use of open space as a toilet is associated with the highest rates of malnutrition, with children in such situations nearly four times as likely to be severely malnourished as those who use flush toilets.

Table 3.13: Malnutrition Rates by Prevalence of Illness and Type of Curative Treatment

Nutrition indicator		Children aged 6-71 months who were reported to have suffered from:				Children aged 6-71 months whose illness is typically treated:		
		No diarrheal episodes	One or more diarrheal episodes	No fever or cough during the two weeks preceding the survey	Fever or cough during the two weeks preceding the survey	With no or family treatment or with spiritual water	By village doctor, homeopath, herbs, pharmacist or another provider	By a fully-qualified doctor at a public or private health clinic or hospital
Moderate or severe	Underweight	50.2	62.9	49.3	59.6	69.2	53.7	42.4
	Stunting	48.4	53.5	48.4	50.3	53.9	51.9	38.6
Severe	Underweight	12.0	20.8	11.2	19.1	15.4	13.9	8.4
	Stunting	18.6	23.9	18.4	21.7	24.1	20.5	14.1

Source: 2000 CNS

3.49 Illnesses and infections reduce the ability of the body to absorb critical nutrients, leading in turn to malnutrition. The CNS data show this syndrome very clearly: children who experienced a diarrheal episode are significantly more likely to experience malnutrition and severe malnutrition than children who did not suffer from diarrhea (Table 3.13). Indeed, 21 percent of children with a diarrheal infection are likely to be severely underweight, as compared to only 12 percent of children with no diarrheal infection. Nor is diarrhea the only illness that reduces nutrient absorption of the body; repeated bouts of fever (indicating infection) and acute respiratory infections can also slow down weight gain and lead to malnutrition. In the CNS 2000 sample, both severe and non-severe

¹⁹ While the average price of a maund (approx. 40 kg) of coarse rice was Tk. 450 for the entire sample, at least 10 percent of sample households faced a price lower than Tk. 350, while another 10 percent faced prices of Tk. 575 or higher.

malnutrition rates are significantly higher among children who had experienced a fever or cough during the two weeks preceding the survey than among children who had not been ill.²⁰

3.50 In addition to infection and illness incidence, the type of medical treatment usually selected for a sick child is also strongly correlated with his or her nutritional status. Children who are typically offered no treatment or home-based treatment for their illnesses are much more likely to be malnourished by every indicator than children who are treated by a village doctor, homeopath or drug vendor. Children in that second category, however, have higher malnutrition rates than those who are taken to a fully-qualified doctor at a public or private health clinic or hospital when ill.²¹

3.51 The availability of and access to health facilities is likely to reduce child malnutrition by increasing the utilization of health services, an important input into child nutrition and health.²² Data from the CNS suggest that proximity to a thana health center does lower child malnutrition (Appendix Table A3.9). Interestingly, however, the largest declines in child malnutrition from having a thana health center within 5 kilometers are observed for the poorest quintile. For example, a thana health center in close proximity to a village reduces the overall incidence of underweight children in that village from 53.5 percent to 51.9 percent. But the decline is far greater – from 63.1 percent to 57.9 percent – among children in the bottom consumption quintile.

3.52 The results with respect to the proximity of a private health clinic are very similar, showing that such access reduces both overall malnutrition rates and those among the bottom consumption quintile and supporting the finding that the poor also use private health facilities. The availability of an NGO clinic in the village, however, has the perverse effect of increasing overall malnutrition rates, probably reflecting the fact that health clinics are located by NGOs in villages where such rates are high. When nutritional outcomes for only the poorest quintile of children are considered, the local availability of an NGO clinic makes a positive difference. For example, the rate of stunting falls from 60.8 percent to 52.2 percent and that of severe stunting drops from 26.5 percent to 22.9 percent for the poorest quintile of children when NGO clinics are nearby. Finally, other infrastructure such as roads and electricity can also have indirect effects on child malnutrition by improving access to health facilities and by improving conditions of food storage and preparation. The CNS data indicate that villages that are electrified are likely to have lower rates of child malnutrition, particularly among the poor (Figure 3.7). For instance, both the rates of severe and non-severe stunting are nearly 10 percentage points lower in electrified villages than in villages without electricity.

3.53 ***Presence of public relief programs and NGOs is associated with a strong reduction in child malnutrition among the bottom quintile.*** Households in Bangladesh are often inadequately protected against weather- and environment-induced shocks, such as floods, droughts and epidemics, because of the absence of well-functioning credit and insurance markets. These shocks can diminish household consumption and thereby harm child nutrition, even lasting damage on youngsters, the CNS data suggest, in the case of weather shocks – especially floods and cyclones. For instance, rates of underweight children in villages that experienced a flood in the five years

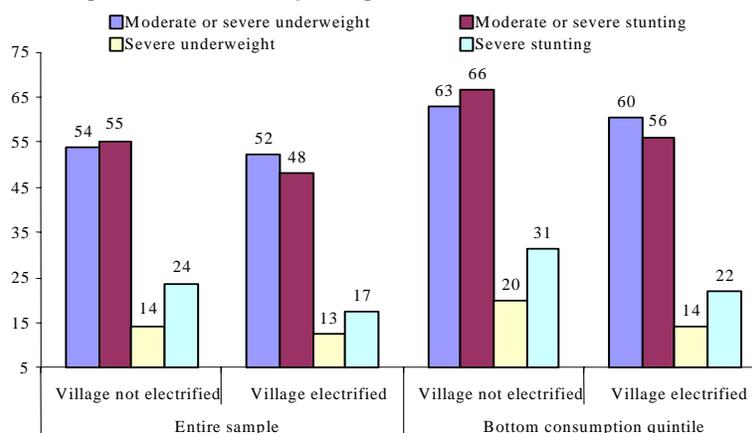
²⁰ It is unlikely that a single bout of fever or cough could lead to severe malnutrition. What is more likely is that the children who reported being ill during the two-week reference period are the ones who repeatedly come down with fever and cough. Such chronic fever and cough is associated with high rates of malnutrition. Indeed, malnutrition also increases a child's susceptibility to infections, and so the 'causality' can go in the reverse direction.

²¹ Of course, the strong correlation between treatment choices and malnutrition may simply reflect the fact that parents who are likely to take their sick children to a qualified health provider or clinic are also the ones who are more likely to practice good feeding and hygiene techniques (due to better education or higher income).

²² However, if health facilities are located (by governments or NGOs) in those villages having the worst health and nutritional conditions, a (perverse) positive association between child malnutrition and availability of health facilities would be observed.

preceding the CNS 2000 are 7 percentage points greater than in villages that experienced no flood, with virtually no difference observed between the overall sample and the poorest consumption quintile. Cyclones and epidemics also have similar effects on child malnutrition. In such a setting, public relief programs can play an extremely important role in providing disaster relief and short-term risk coping.

Figure 3.7: Child malnutrition rates among children aged 6-71 months, by village electrification status, 2000



3.54 The Government of Bangladesh has operated several food assistance programs going back to the 1970s (see Chapter 4 for a more detailed description and discussion). The CNS 2000 data indicate that, while public food transfer programs, such as Food-for-Work and Vulnerable Group Feeding (VGF), have hardly any effect on reducing overall levels of child malnutrition,²³ they have fairly large effects on reducing malnutrition rates among the poorest quintile of children (Table 3.14). For instance, the Food-for-Work program is associated with a reduction of 8-10 percentage points in malnutrition rates among the bottom quintile of children aged 6-71 months old. The CNS data also show very large effects of the presence of either BRAC or Grameen Bank on malnutrition rates among the poorest quintile of children. For instance, the percentage of underweight children is 15 percentage points lower in villages having a Grameen Bank or BRAC program than in villages without one. In the former, the rate of severely underweight children is nearly one-half the rate in the latter villages (15 percent versus 28 percent).

²³ This in turn probably reflects the fact that these interventions are not explicitly targeted towards areas of high incidence of malnutrition.

Table 3.14: Malnutrition Rates and Presence of Government/NGO Programs

Programs operating in the past year in the village of residence	Moderate or severe		Severe	
	Underweight	Stunting	Underweight	Stunting
Entire Sample				
No Food-for-Work program	53.9	51.2	14.9	20.9
Food-for-Work program	52.1	50.6	12.4	19.0
No Vulnerable Group Feeding program	52.4	50.3	14.9	19.3
Vulnerable Group Feeding program	52.6	50.9	11.9	19.5
No Vulnerable Group Development program	51.9	50.0	13.1	19.2
Vulnerable Group Development program	53.0	50.9	12.7	19.5
No Grameen Bank or BRAC program	53.6	50.2	17.7	20.1
Grameen Bank or BRAC program	52.6	50.8	12.1	19.6
Bottom Consumption Quintile				
No Food-for-Work program	68.4	65.5	19.9	31.1
Food-for-Work program	58.6	58.1	15.0	23.3
No Vulnerable Group Feeding program	65.6	66.8	21.0	31.3
Vulnerable Group Feeding program	58.7	56.1	12.8	21.6
No Vulnerable Group Development program	63.6	61.4	15.4	29.1
Vulnerable Group Development program	60.1	59.3	16.2	22.6
No Grameen Bank or BRAC program	74.7	66.3	27.7	30.8
Grameen Bank or BRAC program	59.4	59.4	14.7	24.8

Source: Children aged 6-71 months. 2000 CNS

KEY FINDINGS AND CONCLUSIONS	POLICY IMPLICATIONS
<p>Effectiveness of Targeting VGD, FFE, and VGF are reasonably well-targeted to poor households, with the poorest fifth of the population nearly five times as likely to participate as the richest fifth. However, most of the pro-poor targeting is due to targeting of the poor within communities rather than targeting of poor areas by the center. Exclusion errors are quite high, with a substantial share of eligible households currently not covered by any program.</p>	<p>Priority reform areas to improve targeting outcomes include developing finer targeting criteria to reduce inclusion errors and increase coverage of eligible households currently excluded from the program. Considerable scope exists to improve geographic targeting to concentrate resources in areas that have a greater share of the poor or of the target population.</p>
<p>Assessment of Leakage Even though visible transfer receipts are pro-poor, a large share of budgeted resources appears not to reach the intended beneficiaries, indicating serious problems of accountability. For example, leakage estimates based on data from the 2000 HIES indicate that as much as 75 percent of total FFE transfers do not reach any beneficiary. Marginal incidence analysis of program transfers suggests that expanding them at the margin would be decidedly pro-poor: households in the bottom-fifth of the population would be roughly 4-5 times more likely to benefit from each extra taka of spending than households in the richest fifth. Reforming program administration to stem leakages thus offers a potentially win-win option: not only would reducing leakage free-up additional resources needed to expand program coverage, but increases in spending permitted by these additional resources would be decidedly pro-poor.</p>	<p>Reducing leakage from safety net programs is a policy imperative. Reform options include emulating the design features of other programs with lower system losses (as GOB has done by announcing that the FFE will be replaced by a cash-stipend program to be administered like the female secondary school stipend program), piloting new initiatives such as smart cards or experimenting with alternative payment systems used in successful programs like the RMP, as well as institutionalizing other monitoring tools (periodic survey-based assessments, public expenditure tracking surveys, citizens report cards, etc.) to improve accountability and minimize transaction costs.</p>
<p>Improving the Impact of the Public Safety Net Over time, there has been a welcome improvement in targeting, with some poorly targeted subsidized PFDS ration channels cut back, and others abolished outright. In addition, food transfer programs have shifted objectives from pure relief to development, making one of the most important advances in the evolution of these programs. The change needs to be sustained to ensure that program resources make the greatest possible impact on the long-term welfare of intended beneficiaries. Experience with the 1998 floods suggests that programs such as the VGF and GR have an important role to play in providing much needed assistance to disaster-affected families.</p>	<p>Given Bangladesh's high propensity to natural disasters, it is important to retain some relief programs in the menu of government safety net programs that could potentially be scaled-up to aid short-term risk coping. However, the case for excessively large public food grain stocks to guard against shortages as well as to stabilize prices is weak. Enhancing the development impact of food-assisted targeted interventions requires providing complementary inputs and interventions. In addition, regular monitoring and evaluation is needed to ensure that targeted interventions achieve their desired objectives.</p>

4. REDUCING VULNERABILITY: PUBLIC SOCIAL SAFETY NET PROGRAMS

4.1 In a low-income and disaster-prone country like Bangladesh, mobilizing sufficient resources to ensure adequate food intake and to protect the poor from natural disasters and other idiosyncratic shocks is a daunting undertaking. Bangladesh has made tremendous progress in improving the availability of food grains and strengthening its disaster management capabilities.

4.1: RECENT PROGRESS IN REDUCING VULNERABILITY:

4.2 The country has moved from being chronically in food deficit to self-sufficiency in rice production. Early investments in agricultural research, reforms in inputs markets (particularly for fertilizer, irrigation equipment, and seeds), and improvement in infrastructure have helped spur agricultural production. The government has privatized foodgrain distribution, lifted restrictions on rice and wheat imports by private traders, and reduced its presence in foodgrain markets, all actions that have contributed to improving availability and diminishing deficits in domestic production (Ahmed et. al., 2000). Since liberalization of trade in the early nineties, private sector imports of rice have on several occasions contributed to filling the food availability gap after poor rice harvests (in 1994-95 and 1995-96) and natural disasters (most notably, following the 1998 floods). Seasonality in rice prices is also much reduced, a consequence of rapid growth in dry-season boro rice production and improved integration of markets in different regions (Chowdhury and Haggblade, 2000). More importantly, 2000 HIES data show that households in Bangladesh are by and large able to shield consumption of this staple cereal from fluctuations in price. For most households, no significant intra-year variation in rice consumption is evident (Background Paper 5).

4.3 Over the years, Bangladesh has also made notable progress in its capacity to deal with natural disasters. Large quantities of public resources are now directed to water management, holding food stocks, emergency public works, and flood protection and cyclone shelters. Weather monitoring and early warning systems have been strengthened, and improved wireless operations have been set up in cyclone prone areas. The decline in numbers of deaths during crises reflects an improved ability to evacuate people from disaster zones and to provide shelter. At the same time, the spread of defensive infrastructure such as coastal and river embankments has helped to mitigate the impact of natural disasters. This enhanced capability, as well as the resilience of its people, was in ample evidence during the country's resolute and effective response in 1998 to one of the century's worst floods.

4.4 Notwithstanding these successes, high levels of poverty magnify the adverse effects of natural disasters: poor people and poor communities are frequently the primary victims, in part because they are priced out of the more disaster-proof areas and live in makeshift houses in areas with low quality infrastructure. In addition, various types of economic and non-economic shocks unrelated to natural disasters affect the poor disproportionately (Helen Keller International, 2001). These conditions justify the commitment of successive governments and the donor community to ensure some social protection for the poor. In 2001-02, total government spending on social safety net programs was approximately 1 percent of GDP and 5.6 percent of total government expenditures.

4.5 Section 2 provides an introduction to the main public safety net programs in Bangladesh, along with a short overview of their respective sizes and main objectives.¹ Using data from the 2000

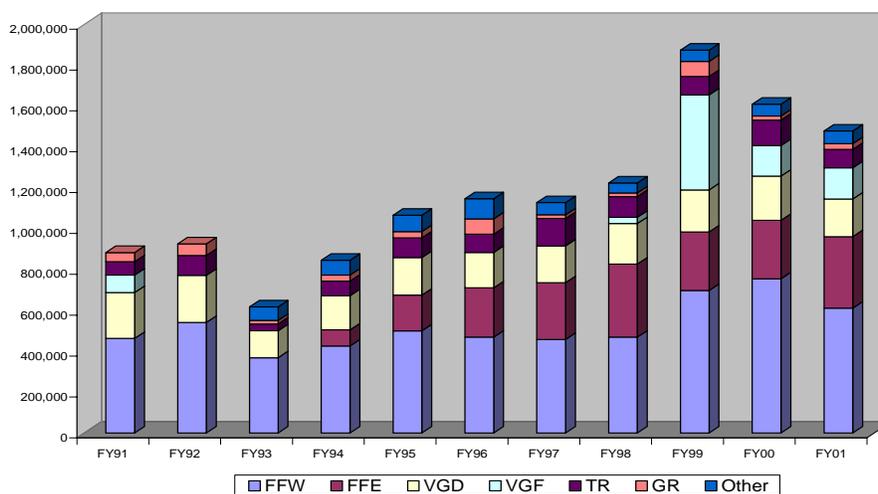
¹ While a variety of direct and indirect interventions – such as access to credit, a better enabling environment that gives poor people employment opportunities, effective communications infrastructure that can be mobilized in times of disaster

HIES, section 3 examines the targeting effectiveness of some of these programs along with some possible options to improve targeting. Transfer of benefits to non-eligible households represents only one type of inefficiency. Misappropriations that result in part from overall program resources not reaching *any* eligible or ineligible beneficiary can also account for a large share of total losses. Section 4 provides rough estimates of leakage from the system for the Food-for-Education, Vulnerable Group Feeding, and Vulnerable Group Development programs, including a few recommendations on how such leakage could be reduced. Finally, section 5 discusses how best to further enhance the relief and developmental impact of government programs.

4.2: MAIN SOCIAL ASSISTANCE PROGRAMS IN BANGLADESH:

4.6 Of the total social safety net expenditures, 95 percent go toward targeted food transfer programs that aim to provide relief assistance as well as to reduce wealth-related disparities in such assets as education, health, income generation skills, and access to infrastructure. Since 1993-94, over 1 million metric tons of food grains have been allocated to these programs each year (Figure 4.1 and Appendix Table A4.1).

Figure 4.1. Allocations to Food Assistance Programs (in metric tons)



4.7 These programs have been successfully and rapidly deployed to ensure food availability during natural disasters, particularly in 1998. In FY99, in response to heavy floods, the food provided by these programs was increased to about 1.8 million tons. At a conservative estimate this is a transfer of more than US\$300 million, a substantial sum by any standard. Aggregate resource transfer under the targeted food assistance programs—not counting grain storage and distribution costs, or associated administrative expenses, etc. — was more than 120 percent of the government's recurrent expenditure on primary education, or nearly 80 percent of the entire budget of the Ministry of Health and Family Welfare that year. The remaining 5 percent of the Government's expenditures on safety nets is directed toward assistance to specific vulnerable groups through a number of smaller programs, including pensions for the elderly, and cash transfers to distressed, widowed or divorced female household heads, to orphans, and to poor freedom fighters (Table 4.1).

etc. – are important to reducing vulnerability, this chapter focuses primarily on publicly funded targeted transfer programs that would formally come under the umbrella of the public social safety net.

Table 4.1. Social Safety Net Programs under Government Budget 2001-02

Name of Program	Tk. (million)	Name of Program	Tk. (million)
Cash Transfer Programs:		Food Transfer Programs:	
Voluntary women's social welfare center	20	Test relief (recently renamed as RIMP)	1452
National social welfare council	20	Gratuitous relief	291
Private Orphanages	115	Vulnerable Group Development (VGD)	2294
Distressed/Widowed/Divorced Women	250	Vulnerable Group Feeding (VGF)	218
Pension for aged	250	Food-for-Work (FFW)	9920
Cash assistance for poor freedom fighters	288	Food-for-Education (FFE)	4610
Housing Fund	150		

Source: Ministry of Finance, Government of Bangladesh

4.8 Over time, the composition of spending on food transfer programs has shifted from pure relief to development objectives. There are a number of food assistance programs in operation, each with its own specific objectives and target population. Some are relief programs that aim primarily at relieving immediate distress, generally due to natural disasters – these interventions are typically mobilized for a limited period and are targeted at the directly affected households. Other programs have explicit development objectives, such as rural infrastructure development, boosting primary school enrollment rates, and human capital development (Table 4.2). Although relief provision remains an important objective, most targeted food programs have gradually shifted in emphasis from relief to development.² Thus overall allocations to programs such as the Vulnerable Group Development and Food-for Education program as a share of aggregate program outlays have been increasing steadily through the nineties (Figure 4.1).

Table 4.2. Allocations to Food-Assistance Programs 1999-2000

Program	Main objective	Program Off-take in 1999-2000 (metric tons)
Food for Work	Employment generation for the poor, mainly in the dry season Development and maintenance of rural infrastructure	754,818
Food for Education	Promote primary school enrollments and attendance, reduce drop-outs and improve quality of education	285,973
Vulnerable Group Development	Assistance to disadvantaged women in rural areas; training in market-based income generating activities, functional education	216,675
Vulnerable Group Feeding	Disaster relief: food grain distribution to needy families in periods of distress	149,138
Test Relief	Employment generation for the poor, mainly in the rainy season (similar to FFW except with lighter labor requirements)	124,508
Gratuitous Relief	Disaster relief: food grain distribution according to perceived need	20,324
Other		57,690
Total: 1999-2000:		1,609,126

Source: Various program documents. Source for program off-takes reported in Appendix Table A4.1.

4.9 The benefits of the various programs extend beyond the simple transfer payment:

- The Vulnerable Group Feeding (VGF) and Gratuitous Relief (GR) are the main programs used by the government to provide emergency, short-term relief to disaster victims.

² The change in orientation of food transfer programs from relief to development objectives has been a gradual process since the early 1980s and is in line with one of the main recommendations of the 1988 joint task force of the Government and aid donors on strengthening institutions for food-assisted development.

However, besides the short-term assistance these transfers provide, they can also have extremely important longer-term benefits in helping households to avoid costly and damaging risk coping measures (e.g. selling productive assets, reducing food intake, child labor).

- Food-for-Work (FFW) and Test Relief (TR) are counter-cyclical workfare programs that provide the rural poor with employment opportunities during the lean seasons. In addition, these programs also help build and maintain infrastructure that is important in improving communications and enhancing productivity in rural areas.
- Vulnerable Group Development (VGD) has evolved from providing relief to increasing self-reliance by tying food transfers to a package of development services – NGOs working in partnership with government provide poor rural women with skill, literacy, and numeric training; credit and savings mobilization; and health and nutrition education. The program also facilitates the entry of VGD beneficiaries (after training) into regular NGO credit programs and acts as a transition from relief aid to a longer-term development program.
- Food-for-Education (FFE) aims to remove economic barriers to primary school enrollment by the poor. An “in-kind” stipend that links monthly food transfers to poor households to primary school enrollment of their children, it promotes four objectives: increased school enrollment, better school attendance, lower drop-out rates, and higher quality of primary education.³

Box 4.1. Description of the Main Food-Assisted Workfare Programs

Food-for-Work (FFW) and Test Relief (TR): FFW is an umbrella of different programs and projects carried out by a number of line ministries in collaboration with various donors. The Government also runs several FFW programs without donor support, such as the Rural Infrastructure Development Program (RIDP) implemented by the Ministry of Disaster Management and Relief. The main donor supported FFW program is the Rural Development (RD) program supported by the World Food Program (WFP), bilateral donors, and the Government.

All FFW programs share the basic objectives of developing rural infrastructure and providing employment to the rural poor during the dry season months between January and April. Some programs such as RD provide longer-term employment, skills training, and nutrition education to poor women. Infrastructure projects undertaken by the FFW programs include activities such as digging canals, building embankments, developing ponds, and building and maintaining roads. Test Relief (TR), recently renamed as the Rural Infrastructure Maintenance Program (RIMP) and operated by the Ministry of Disaster Management and Relief, is in most respects very similar to other FFW projects. However, unlike the FFW projects, TR projects are carried out during the rainy season between July and November, and undertake activities with much lighter labor requirements.

In the programs funded by the Government, resources are, by and large, allocated across regions in proportion to population. Beneficiary selection is via self-targeting, since relatively low wages and labor requirements are set in a way as to discourage the non-poor from participating. On each project there is a Project Implementation Committee comprising community “notables” and headed by the Union Parishad chairman. The committee is entrusted with assessing project priority, feasibility, and benefits, as well as with maintaining a list of the beneficiaries employed on the project. Allocations for each project are made on a notional basis, assuming that 1000 cu. ft. of earth work requires 50 kilograms of wheat, and that workers will be paid a wage rate of 5-6 kilograms per day worked. Within each thana, the Project Implementation Officer acts as the main liaison between the PIC and the Government.

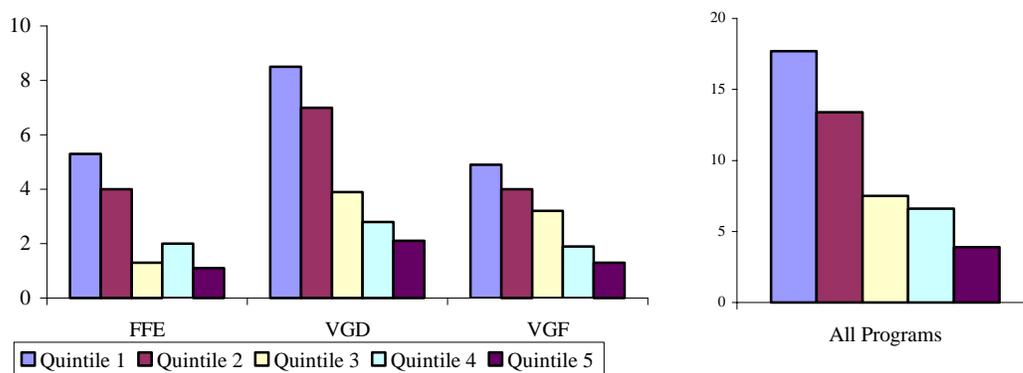
³ As discussed later in this chapter, since July 2002 FFE has been changed to a cash stipend program.

4.3: TARGETING EFFECTIVENESS OF FOOD-ASSISTED TRANSFER PROGRAMS:

4.10 A welcome improvement in targeting came in the early nineties when, in an effort to reorient food transfers to the poor, the Government abolished the poorly targeted urban and rural ration channels.⁴ The share of resources allocated to targeted food-assistance programs has increased through the nineties: almost 80 percent of the total food grains channeled through the Public Food Distribution System (PFDS) is now directed toward these programs. The remaining 20 percent passes through the so-called untargeted, “monetized” channels of the PFDS: Essential Priorities (subsidized food grain sales to the armed and paramilitary forces, hospital and jail inmates), Other Priorities (subsidized sales to workers of government institutions, fire and civil defense departments), and Open Market Sales (to stabilize domestic prices).

4.11 2000 HIES data can be used to examine the targeting effectiveness of the VGD, FFE, and VGF programs which jointly accounted for 40 percent of food-assisted programs in FY00 (for details, see Background Paper 5). These programs aim to reach different target populations. The target group in the FFE naturally comprises those households that have children enrolled in primary school, but within this large potentially eligible group, local committees select the poorer households based on criteria that include households with distressed female heads, low-income tradesmen, and the functionally landless (see program description in Box 4.2). Because of its objective as a transitional welfare program, the VGD is targeted to those women who have the capacity to learn and can engage in income generation activities. And similar to the FFE, within this large potentially eligible group, local committees select the poorer women using criteria such as female-headship, functionally landless women, women with extremely low or no family income, women day-laborers, and women who lack productive assets (Box 4.2). VGF transfers are targeted to households affected by disasters, with priority given to those disaster-affected households that have low income, that lack agricultural land and productive assets, and that are headed by women or day-laborers (Box 4.3).

Figure 4.2. Average Participation Rates by Income Group



4.12 ***VGD, FFE, and VGF programs appear to be reasonably well targeted to the poor.*** Estimates of the fractions of the population that participate in the program within each quintile show all three programs to be reasonably well-targeted toward the poor (Figure 4.2).⁵ The poorest fifth of

⁴ The impetus for shifting resources from ration channels to transfer programs targeted to the poor arose from a need to contain a ballooning food account subsidy, growing discomfort over the urban middle-class bias in the ration system, evidence of pilferage from ration channels, and shrinking resources from food-aid, all of which led the Government to abolish the main ration channels in 1993.

⁵ The pro-poor distribution of benefits is evident even after taking into account differences in the amount of transfers across households.

Box 4.2. Description of Main Food-Assisted Development Programs

Food-for-Education (FFE): FFE is an “in-kind” stipend program that links monthly food transfers to poor households to primary school enrollment of their children in order to achieve four objectives: increased school enrollment, better school attendance, lower drop-out rates and higher quality of primary education. Households with children in primary school receive wheat or rice provided the children attend at least 85 percent of their classes and the family sends all children of primary school age to school.

The program is implemented mainly in rural areas by the Government’s Primary and Mass Education Division, with the assistance of the Directorate of Primary Education. There are two stages of targeting. First, in each thana, the Thana Education Committee (comprising the Thana Nirbahi Officer, Thana Education Officer, representatives of local head teachers, education specialists, and elites) recommends one or more unions deemed to be economically backward and to have low literacy rates for inclusion in the program. Based on the thana recommendations, the Deputy Commissioner, in consultation with the Minister in charge of the district, makes the final decision. Within each selected union, all government, registered non-government, satellite, and low-cost primary schools as well as one independent madrasa are eligible for the program. However, in order to provide incentives for improving the quality of primary education, schools are required to meet prescribed minimum standards on attendance, pass rates, and exam schedules in order to participate. Second, School Management Committees, in consultation with the Compulsory Primary Education Ward Committee, draw up a list of beneficiaries for the program. The Government defines the criteria to include (i) distressed female-headed families; (ii) day-laborers; (iii) low-income tradesmen and (iv) households that are functionally landless. In addition, in order to be eligible for the FFE, the household should not currently be a participant in any other targeted food assistance program. A maximum of 40 percent of students at any school may be included.

Vulnerable Group Development (VGD): Started in 1975 as Vulnerable Group Feeding, this program was renamed as it evolved from providing relief to increasing beneficiaries’ self-reliance. VGD provides poor disadvantaged women in rural areas with monthly food transfers and a package of development services that mobilize savings and train beneficiaries in different income generation skills. Beneficiaries receive a monthly ration of wheat and training for 18 months if they have complied with a compulsory monthly cash savings requirement. The VGD program, implemented by the Government with support from WFP and a number of bilateral donors, comprises several subprojects of which the Union Parishad (UP) VGD is by far the largest. In the UPVGD, women are organized in groups and provided with a package of development services (primarily from the Bangladesh Rural Advancement Committee) comprising: awareness building on social and health issues, functional literacy and numeracy, training in income generating skills, participation in savings schemes and access to credit to start up new income-generating ventures.

VGD is implemented by the Directorate of Relief and Rehabilitation under the coordinating authority of the Department of Women’s Affairs in the Ministry of Women’s and Children’s Affairs (MWCA). There are two steps in the selection of cardholders. The national VGD committee distributes cards across the 461 rural thanas. The higher a thana’s food insecurity rating by the Government and WFP, the greater the share of cards it gets. A minimum of 30 women are then selected from each union by union and thana-level local committees according to selection criteria which include functionally landless women, women with extremely low or no family income, women who are day laborers, and women who lack productive assets. Preference is given to female heads of households (widowed, separated, deserted, divorced or with disabled husbands) and to women who are physically fit to train. Women who receive assistance from other programs or have participated in the VGD in an earlier cycle cannot be selected for the VGD.

the population, for instance, was nearly 5 times as likely to participate as the richest-fifth. These outcomes are comparable to the performance of targeted programs in other countries.⁶

4.13 Several factors underlie the pro-poor distribution of benefits. First, the targeting criteria used to select beneficiaries narrow the eligible population to the degree that more than half the target beneficiary group is from the bottom two-fifths of the population. Second, even among eligible beneficiaries, it appears that local program administrators go beyond the criteria to identify the poor from among the eligible populations. Thus, even among the group of eligible beneficiaries, a person from the lowest quintile is about 2.5 times as likely to be selected for the program as an individual from the richest quintile. Third, in the case of the FFE program, part of the reason the distribution is pro-poor is simply because poor households on average have more children of primary school-going age.

⁶ Grosh (1994) reviewed the design and targeting outcomes of 47 government systems in Latin America, and found that a median targeted program delivered about 70 percent of all benefits to the poorest 40 percent of the households. Subbarao et. al. (1997) also review targeting efficiency for a number of different food-based programs, and find that it tends to be best for programs involving work requirements, modest under food stamps, and lowest under price subsidies and quantity rationing.

Box 4.3. Description of the Main Food-Assisted Relief Programs

Vulnerable Group Feeding (VGF): VGF, designed to provide one or more months of food rations to a selected number of households in a period of distress, is implemented by the Directorate of Relief under the Ministry of Disaster Management and Relief. Resources are allocated to the program by the Ministry of Finance when thought necessary.

Under the program, food is distributed only among thanas that are affected by disaster. Among the selected thanas, two-thirds of the food is distributed according to population and the remaining one-third is allotted to thanas rated as having very high or high food insecurity on the Government/WFP resource allocation map for food-assisted development. Within thanas, the households to receive food are selected by local communities. Each Union Parishad (UP) chairman sends a list of potential beneficiaries (compiled from recommendations of ward members, with 50 percent of the beneficiaries taken from female ward member lists) to a thana-level committee including the Thana Nirbahi Officer (TNO), UP chairmen, and other local government officials, which makes the final selection. Government selection criteria are defined to include: (i) households in which the head earns less than 300 Takas in a normal month; (ii) households with no agricultural land or productive assets; and (iii) households headed by day-laborers. Priority is given to households that have been physically dislocated by the disaster and to female-headed households.

Each household on the list is issued a ration card to receive food for a few months. The Ministry decides how much they receive and for how long, depending on the extent of the disaster. In practice, it is not always possible to restrict food distribution to selected households when other needy households are also present at the UP center at the time of distribution. In such cases, the distributors sometimes have to reduce the amount given to each card holder in order to increase the total number of beneficiaries.

Gratuitous Relief (GR): GR, designed to provide emergency relief to disaster victims, is also implemented by the Directorate of Relief under the Ministry of Disaster Management and Relief. While GR is a relatively small program, it is the main way in which the Government provides immediate, short-term relief to disaster areas. Union Disaster Committees (UDCs), comprising the UP Chairman, local elites, and local government officials, collect information on the number of households affected and the extent of the disaster. This information is compiled at the thana-level by the TNO, and relayed to the Ministry by the District Deputy Commissioners. Based on these reports, the Ministry determines the type of assistance (cash, food, blankets, building materials, and so on), geographic allocations, and beneficiary entitlements. The UDC selects the households to receive assistance.

4.14 *Most of the pro-poor targeting of the FFE and VGD programs is due to targeting the poor within communities rather than central actions to target poor areas.* Although overall targeting performance reflects both the effectiveness of the allocation within communities and the ability of the center to allocate resources across regions, it is not obvious in theory which locus of decision is more likely to be effective.⁷ Empirically, the overall targeting performance of a program can be measured by a 'targeting differential' that estimates the difference between the proportion of poor and non-poor participants. This differential can be disaggregated into an inter-village and an intra-village component, with the former measuring the success of the center at channeling resources to poor villages and the latter capturing the success of villages in reaching poor households (Ravallion, 2000). This is the approach followed by Galasso and Ravallion (2000) who assess the performance of the FFE program using the 1995-96 HES. The same methodology was applied for the VGD program using the 2000 HIES data.⁸ Table 4.3 reports both sets of results.

⁷ Arguments in favor of decentralized (community-based) targeting are based on the assumption that more information is available there about who is poor than at the center and that communities tend to be more accountable to local people. On the other hand, local-level spending decisions may be more susceptible to program capture by local elites. The success of decentralization will then depend critically on the trade-off between the informational advantage of communities and an accountability disadvantage (Galasso and Ravallion, 2000). Moreover, it is possible that communities may not share the center's objectives, or may face different constraints in achieving them. In decentralized anti-poverty programs such as the FFE and VGD, the ability of the programs to assist the poor clearly depends on community behavior. Without successful targeting at the local level, even large redistributions from rich areas to poor ones can have little impact on targeting nationally (Datt and Ravallion, 1993). Ultimately, the relative success of the center versus the community in targeting the poor is an empirical one.

⁸ The same analysis could not be repeated for the FFE with the 2000 HIES because of the extremely low participation rate in the program. Of the 252 rural communities included in the survey, households from only 26 of these reported that they had received transfers from the program. Decomposition of VGF targeting into inter-village and intra-village components according to poverty levels was not under-taken since geographical targeting, by the nature of the program's objective of providing disaster-related relief, is done by disaster location rather than poverty concentration.

Table 4.3. Inter- and Intra-village Decomposition of Targeting Performance: FFE and VGD

	Proportion receiving transfers		Targeting Differential	Decomposition of Targeting Differential	
	Poor	Non-Poor		Intra-village	Inter-village
FFE -- 1995 HES					
All villages	0.118	0.079	0.039	0.036	0.003
Participating villages	0.462	0.315	0.134	0.146	-0.012
VGD -- 2000 HIES					
All villages	0.071	0.030	0.040	0.040	0.000
Participating villages	0.097	0.042	0.055	0.055	0.000

Source: FFE results from Galasso and Ravallion (2000). VGD results calculated from 2000 HIES.

4.15 As the table shows, both programs are targeted to the poor. Among all villages, 12 percent of the poor received transfers from FFE, as compared to 8 percent of the non-poor. Similarly, the VGD program aided 7 percent of the poor, while only 3 percent of the non-poor received transfers. The 'targeting differential' was therefore, positive for both programs.⁹ The maximum targeting differential – if all resources were to go to the poor – is 20 percent in the case of the FFE and 10 percent for the VGD. So the actual targeting differential of 4 percent (in both programs) achieved between one-fifth and two-fifth of the maximum, given that the scale of the two programs was insufficient to cover all the poor, even without leakage to the non-poor.

4.16 Decomposition of the aggregate targeting differential into intra-village and inter-village components shows that most of the pro-poor targeting performance of both programs is due to pro-poor targeting within villages. The decomposition shows that in the case of these programs, decentralization of beneficiary selection has indeed helped in reaching poor households. The weak link in channeling resources from the center to the poor appears to be the process by which the center allocates resources across regions.¹⁰ Allocations made by the center are not strongly correlated with the level of poverty in local communities.

4.17 ***Targeting outcomes can be improved by using geographic targeting to concentrate resources in areas with a greater share of the poor or of the target population.*** As the decomposition of targeting differentials shows, there is considerable scope for improving geographic targeting of poor areas by the center. Of the various government food assistance programs described above, only the VGD and Rural Development (a FFW program supported by WFP) – and to a limited extent the FFE – attempt regional targeting.¹¹ In most of the FFW programs there is little attempt to concentrate resources geographically into relatively more poor areas. By and large, in programs funded by the Government, resources are allocated to the different districts, thanas, and unions according to population only. Because of constraints of political economy of otherwise, the requirement that all thanas participate naturally interferes with targeting effectiveness.

4.18 In the case of transfer programs that aim to reach specific target groups, there is also scope for improving geographic targeting by focusing resources in areas that have the largest shares of the target

⁹ The targeting differential lies between minus one (when the program is perfectly targeted to the non-poor) and plus one (when it is perfectly targeted to the poor). A value of zero indicates that the poor and non-poor are equally likely to receive assistance from the program.

¹⁰ This finding is in keeping with evidence from several other countries as well (e.g. Alderman, 2001; Schady, 2000).

¹¹ Under the VGF and GR – the two main disaster coping programs – food is distributed only among areas that are affected by a disaster. Areas that are more severely affected may be assigned a greater share of the resources, as was done in the VGF program following the 1998 floods (del Ninno and Roy, June 1999).

population. In the FFE program, for instance, a main objective was to offer incentives to parents to send their children to school. The striking regional variations in school attendance rates, however, suggests that the program could have been made much more effective if more resources were directed to the areas with lowest attendance (World Bank 2000b).

4.19 Bangladesh is well positioned to implement geographic targeting. It has recently completed both a census exercise and a nationally representative household survey. In addition, the Bangladesh Bureau of Statistics (national databank) and the Local Government Engineering Department have both developed Geographical Information System databases that record spatial characteristics throughout the country. There could be high payoffs to integrating these sources of information into poverty maps (Box 4.4) or target population maps that could then be used to improve targeting of food assistance or other such programs.

Box 4.4. Poverty Maps

Finely disaggregated poverty maps offer a potentially useful tool to improve targeting. Broad regional targeting (e.g., at the division or district level) by itself may result in high leakage of resources to the non-poor and, by excluding many of the country's regions, it may also leave out a considerable portion of the poor. Within smaller geographic areas, however, income disparities tend to be much smaller. Targeting smaller administrative areas such as thanas can therefore reduce leakage significantly.

Targeting thanas or unions requires information on living standards at the local level, not currently available in Bangladesh. However, the Research Department at the World Bank (see Hentschel, et al., 2000; Elbers et al, 2000) has been developing a technique that combines household survey and census data to estimate consumption-based welfare indicators for small geographic areas such as districts and thanas —i.e., a poverty map. A poverty map can highlight statistically reliable differences in local poverty levels at a resolution higher than national level data can provide. Currently, similar poverty maps are used in countries including Nicaragua, Panama, and Guatemala to target transfers to poor areas.

4.20 ***A second reform area to improve targeting outcomes is developing more precise and restrictive targeting criteria to clearly identify intended beneficiaries, and taking steps to ensure that program resources reach this group.*** In addition to assessing whether the programs are reaching the poor, it is also important to evaluate how successful they are at reaching their intended beneficiaries. If a training program reaches people who are too old to learn, it is a waste of resources; if a relief program reaches non-affected people, it is also a waste, especially if all affected people have not been reached. For example, during the relief operations after the 1998 floods, the VGF program targeted resources to all areas (both flooded and non-flood affected areas) and as a result it was not effectively targeted to flood-affected households: approximately 25 percent of VGF recipients were not directly exposed to the flood (del Ninno and Roy, October 1999). Similarly, studies report that between 20-30 percent of the FFE beneficiaries do not meet any of the targeting criteria (leakage estimates range from 30 percent from the 2000 HIES, 26 percent in a 1997 survey by BIDS and more recently, 21 percent in Ahmed and del Ninno, 2001). Participation by ineligible households naturally implies that a smaller share of the target population can be covered by the program.

4.21 Under-coverage is exacerbated because the targeting criteria permit a much larger share of the population to be eligible than is possible with available program resources. For example, 2000 HIES data show that 85 percent and 91 percent of the target populations eligible for the FFE and VGD did not receive transfers from the programs. Given these high rates of under-coverage, it is worth

investigating if more precise and restrictive targeting criteria can be developed such that the programs cover all those who meet the criteria, leaving less room for patronage and arbitrary selection.¹²

4.22 Of-course, refining targeting criteria or improving geographic targeting of program resources will not in itself guarantee that these resources will reach the target population, as this also depends on the extent to which program administrators in different regions pass on resources received to their intended beneficiaries. The topic of the extent of leakage of program resources from the system is taken up in the next section.

4.4: ASSESSMENT OF LEAKAGE FROM FOOD-ASSISTED TRANSFER PROGRAMS:

4.24 Most estimates in Bangladesh of the total number of beneficiaries of the various food assistance programs have relied primarily on macro data on total disbursements in conjunction with entitlements per beneficiary under program guidelines to infer the total number of households benefiting from them. Data from the 2000 HIES can be used to “blow-up” the number of households participating in the programs, as well as the total amount received, thus arriving at a rough estimate of the total program beneficiaries and disbursements throughout the country.¹³

Table 4.4. Program Outlays versus Survey Estimates

Program	2000 HIES-based survey estimates (metric tons)	95% Confidence Interval for estimate	Program Off-take for FY 1999-2000 (metric tons)	Survey estimate as % of aggregate program allocation
VGD	99,978	[72,894, 127,061]	216,675	[34% – 59%]
VGF	70,760	[44,251, 97,267]	149,138	[30% – 65%]
FFE	49,951	[27,192, 72,710]	285,973	[10% – 25%]

Source: 2000 Household Income and Expenditure Survey (HIES) Household Questionnaire
Aggregate Program Off-take: *Bangladesh Food Grain Digest*, World Food Program, Dhaka, Bangladesh

4.25 ***Even though visible transfer receipts are pro-poor, a large share of budgeted resources appear not to reach their intended beneficiaries, indicating serious accountability problems*** Estimates of aggregate household transfers for the VGD, VGF, and FFE programs obtained from the HIES are considerably lower than aggregate program off-take statistics (Table 4.4). The findings suggest that as much as 35 percent of the food grains allocated to the VGF, 41 percent of the VGD, and an overwhelming 75 percent of allocations to the FFE do not reach *any* household (i.e. summing over the entire population, regardless of eligibility criteria).¹⁴ There are two main reasons for the observed discrepancy: (i) the number of beneficiaries observed in the survey is considerably lower than that suggested by administrative records (this is the case with the FFE and VGF), and (ii) the average

¹² Finer targeting usually entails higher administrative costs associated with identifying, reaching, and monitoring the target population. For example, Grosh (1994) estimates (across various programs and countries) that targeted transfers cost about 3-8 percent more than a similar universal transfer. Therefore, the costs of inclusion errors and exclusion errors that arise from poor targeting must be balanced against the higher administrative costs of targeting, when considering finer criteria and mechanisms for screening (see also, Subbarao et. al., 1997).

¹³ Data from national household surveys are routinely used to estimate means, rates, and ratios (e.g. average consumption of rice, percentage of electrified households, ratio of earners to dependents) as well as (though this is less common) to estimate totals (e.g. total consumption of rice in the country). The principle underlying the methodology to estimate total amount of food transfers received by beneficiary households is very similar to that used to estimate means. The basic idea is to use the survey data on households participating in each program in conjunction with sampling weights to infer the total number of households estimated to be participating in the country. These data, along with the amount received by each beneficiary household, is then used to infer the total amount received by all beneficiaries in the country.

¹⁴ We should note that leakage might be a problem with other programs as well, not just the ones reviewed in the report. Other programs could not be evaluated because of lack of data on utilization rates in the 2000 HIES.

amount received by each beneficiary is less than the full entitlement according to program guidelines (the main reason in the case of the VGD).

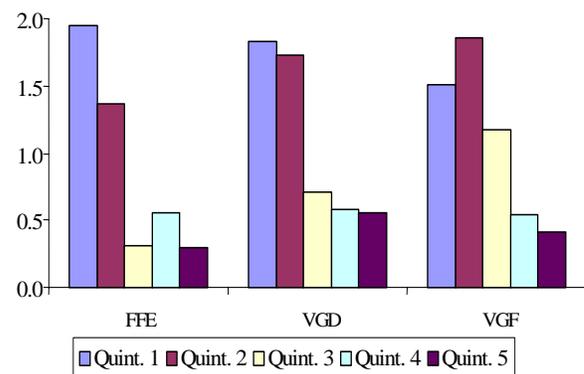
4.26 The survey-based estimates of leakage should be interpreted with caution, as other reasons could potentially explain why the survey reports such low coverage rates and receipts.¹⁵ However, studies of other transfer programs (e.g., Alderman 2001) find a closer correspondence between what households reported and what was authorized using the same methodology; therefore the finding of leakage is not built into the methodology. Any conclusion, overall, as to the “pro-poor” nature of spending on these programs based on the incidence analysis presented earlier must be balanced against these findings that suggest that a large share of the total resources allocated to the programs fail to reach their intended beneficiaries.

4.27 Problems of leakage are not confined to Bangladesh alone, nor is leakage an inevitable outcome of such food distribution programs. Using a similar approach in the Indian context, Ahluwalia (1993) found that roughly a third of the food grains that were supplied in the Public Distribution System in India did not reach beneficiaries. Alderman (1988) found that approximately 69 percent of subsidized wheat released by the government in Pakistan to ration shops did not reach consumers. By contrast, however, Jayne et. al. (2000) found little evidence of leakage of food grains from the distribution system in Ethiopia. What is particularly worrisome in the Bangladeshi context is that similar calculations for the FFE program using the 1995-96 HES indicate substantially lower shortfall, indicating that problems of leakage have deteriorated with time.

4.28 ***Reforming program administration to stem leakage offers a potentially win-win situation.*** Levels of leakage appear to be high, unacceptably so given that over 80 percent of the eligible population is currently not covered by the programs. Moreover, increased allocation of resources to these programs appears unlikely, given declining levels of food-aid. If pilferage and system losses can be reduced, coverage of the intended beneficiaries could be substantially improved at no additional cost to the public exchequer. Furthermore, the findings of the marginal analysis of program transfer receipts discussed below suggests that increasing resource allocation beyond existing levels would be strongly pro-poor.

4.29 Average participation rates show that the targeted food transfer programs, by and large, reach the poor. However, average participation rates do not necessarily provide a reliable guide to the possible effects of a change in aggregate spending on the program. For instance, it is possible that as the size of a program increases, the likelihood of detecting leakage to richer households may decline, with the result that the rich may now be more likely to participate and thus gain a disproportionately large share of the marginal benefits, even though their share of average benefits is low. Alternatively, if public spending tends to reach the rich before the poor, and there is some level of saturation in the transfers appropriated by the rich, then the poor may benefit more from an increase in spending beyond existing levels (Lanjouw and Ravallion, 1999, Wodon and Ajwad, 2000).

Figure 4.3. Marginal Odds of Participation by Income Group



¹⁵ For instance, rather than due to misappropriation of resources, this could also be due to errors related to respondent misreporting, recall difficulties, and sampling errors.

4.30 Marginal incidence analysis asks how changes in spending on a program are likely to be distributed across different groups. Estimates of marginal incidence, presented in Figure 4.3, show that the marginal odds of participation for the VGD, VGF, and FFE programs decline with per capita expenditure quintiles.¹⁶ These estimates, therefore suggest that at the margin, an expansion of all three programs would be decidedly pro-poor. Equivalently, a fiscal retrenchment that entailed scaling back the programs would reduce participation by the poor more than the rich. These results reinforce the view that extra public action is warranted to reduce leakage from the system.

4.31 ***Options for reform include (a) emulating design features of other programs with lower system losses (e.g., cash-based programs), (b) piloting new initiatives (e.g. smart cards) and (c) strengthening monitoring systems along with increasing public access to information.*** Bangladesh has a wealth of institutional diversity and experience with alternate forms of targeted assistance programs from which to draw lessons. It has, in the past, shown willingness to experiment and adjust: dropping non-performing ration channels, trying to reform them, experimenting with new programs, and subjecting them to critical outside evaluations (Ahmed et. al., 2000). The need to monitor, fine-tune, re-design, and re-deploy remains just as important. Indeed, recognizing the need to strengthen governance, the government and donors have jointly set up a steering committee to identify causes of and measures to overcome leakage from targeted distribution programs. The government also announced that, with effect from July 1, 2002, the Food-for-Education Program would be replaced by a cash stipend for primary school students. As the experience of the Government's Female Secondary Stipends program suggests that problems of leakage in managing cash stipends deposited in beneficiary bank accounts are lower than in the FFE, the new program will use the same payment system as in the stipend program, which is a very welcome development.

4.32 Past experience with the FFW programs also reinforces why a shift to cash-based transfer programs is worth considering more carefully, on the grounds of reducing leakage and system losses. Studies have shown that FFW scheme managers pilfer and sell about 30 percent of FFW wheat, and FFW recipients also sell a further 40 to 60 percent of their wheat allotments immediately upon receipt. Given the de-facto monetization by food-aid scheme managers and recipients, public monetization at port, and distribution of cash rather than food, could reduce the double transport costs currently incurred as FFW supplies move to rural areas at public expense, only to make a return trip through private marketing agents.¹⁷ Of course, cash-based transfer programs are no panacea by themselves alone: regardless of mode of transfer, strengthening monitoring and accountability mechanisms remains a high priority.

¹⁶ In order to assess marginal incidence, we examine the effect of expanding the overall size of the program by estimating a linear probability model that relates probability of program participation to the average participation rate in the region (including all quintiles). The regression coefficients (plotted in Figure 4.3) estimate the effect of a change in overall program size in the region on the probability of participation for individuals in different quintiles. All regression coefficients are significant at 1 percent.

¹⁷ A detailed discussion of the arguments for monetization of food-aid and moving to a system of cash-based transfers is contained in Chowdhury and Haggblade (2000) and Dorosh and Haggblade (1997).

4.33 There are other innovative program design features that may be considered in order to improve accountability while minimizing transaction costs. For instance, smart cards (Box 4.5) have been used in many countries to reduce administrative costs and the possibility of error and fraud in the provision of various services.¹⁸ Leakage in the Rural Maintenance Program (RMP) – a cash-for-work program employing rural women for road maintenance – is also believed to be very low because of the unique wage payment system. Salaries for each road maintenance association are paid by a bank transfer every two weeks directly into a maintenance crew bank account that is operated by the elected representative of the workers. Potential for leakage is minimized since certification by officials is not required to withdraw payments, in addition to which involvement of local government officials and NGOs like CARE helps introduce checks and balances into the system and thus improve accountability.

Box 4.5: Smart Cards

Smart cards are cards with a memory chip which are issued to each program participant and can record information such as the amount of food-grain or cash transfer the beneficiary is entitled to. Each transaction (i.e., receipt of transfer or loan) is recorded simultaneously in the recipient's card and the distributing agencies computer. The advantage of smart cards is that they allow offline transactions and do not require any networking infrastructure. There is an up-front investment cost of producing and distributing smart cards, and setting up terminals that can read these cards; however, the technology is well worth exploring since it holds the possibility of lower administrative costs and reducing bogus transactions.

4.34 There are various instruments that could be used for strengthening monitoring (Box 4.6). The government should ensure that program assessments, using instruments such as the PETS (see below), Client Satisfaction Surveys and HIES, are conducted regularly to set in place an ongoing system of periodic evaluation. Uganda's experience with the education sector is a good example of how measures to strengthen monitoring systems and increase public access to information can greatly reduce inefficiency and corruption. Following a Public Expenditure Tracking Survey (PETS) in 1995 that showed that at most 20 percent of the intended non-salary public spending on primary education reached schools, the government undertook several steps to increase information flow and transparency (e.g., newspapers and the radio regularly announced the transfer of public funds to districts, and schools were required to post receipt of funds). A follow-up survey four years later showed a dramatic improvement, with schools receiving on average 90 percent of their budgeted allocations (Reinikka, 2001).

¹⁸ Experience with smart cards has been growing. Some notable examples are the Swazi Business Growth Trust in Swaziland and the Swayam Krishi Sangam – a Grameen Replication program in Andhra Pradesh that provide loans to small farmers and women, respectively. Other examples abound in India: Kerala is piloting the use of the technology as ration cards; members of a women's milk co-operative society in rural Rajasthan have been using this technology to maintain their milk delivery and payment records; and Amul uses the cards to store details of milk transactions from farmers to the co-operative.

Box 4.6. Selected Tools for Improving Monitoring and Evaluation

Multi-Topic Household Survey (e.g., the HIES) is a multi-subject nationally representative integrated survey that provides a means to gather data on a number of aspects of living standards to inform policy. Estimates of program participation based on the survey can be compared to administrative records to assess leakage of program resources. For examples, see <http://www.worldbank.org/lms/>

Client Satisfaction Survey is used to assess the performance of government services based on client experience. The surveys shed light on the constraints clients face in accessing resources, their views about the quality and adequacy of the program, and the responsiveness of government officials. These surveys are usually conducted by a government ministry or agency. For examples, see <http://www4.worldbank.org/afr/stats/wbi.cfm#sds>

Citizen Report Cards have been conducted by NGOs and think-tanks in several countries, including Bangladesh. Similar to client satisfaction surveys, they have also investigated the extent of corruption encountered by ordinary citizens. A notable feature has been the widespread publication of the findings. For examples, see <http://www.worldbank.org/participation/web/webfiles/philipreport.htm>

Participatory Monitoring and Evaluation involves stakeholders at different levels working together to identify problems, collect and analyze information, and generate recommendations. For examples see <http://www.worldbank.org/participation/partme.htm>

Public Expenditure Tracking Surveys (PETS) track the flow of public funds and determine the extent to which resources actually reach the target groups. The surveys examine the manner, quantity, and timing of releases of resources to different levels of government, and to the beneficiaries. PETS can be used to get information on delays, leakage and corruption. For examples, see <http://www.worldbank.org/research/projects/publicspending/tools/tools.htm>.

Source: Monitoring and Evaluation: Some Tools, Methods, and Approaches. OED, World Bank, 2002.

4.5: IMPROVING THE IMPACT OF THE PUBLIC SAFETY-NET:

4.35 The previous sections have examined the targeting effectiveness and leakage of food assistance programs. The discussion in this section focuses on the effectiveness of Bangladesh's public safety net in achieving relief and developmental objectives.

Balance between relief and development focused safety net programs.

4.36 Although initially instituted as relief efforts, targeted programs have steadily evolved toward a greater focus on development objectives. This is of vital importance as, large as this might be, the aggregate resource transfer under these programs represents only a small share of total per capita consumption of beneficiaries, even for those in the bottom-fifth of the income distribution. The gradual shift in emphasis from relief provision to more explicit development objectives during the nineties represents one of the most important advances in the evolution of these programs, and needs to be sustained to ensure that the program resources have the greatest impact on the long-term welfare of their intended beneficiaries.

4.37 However, given the propensity of natural disasters in Bangladesh, it is important to also retain some relief programs that can be rapidly scaled-up to provide disaster relief and short-term risk coping. The recent massive flood in 1998 illustrates the important role played by the two main relief programs – GR and VGF – in assisting flood affected households. Studies by FMRSP-IFPRI suggest that while direct distribution through these programs was quite small in comparison to private imports, they played an invaluable role in targeting relief to those in need. Immediate short-term relief after the flood was mainly provided by the GR. The program was rapidly expanded (with some assistance from bilateral donors), and relief efforts began in August through provision of 20,400 metric tons of rice, and another 30,800 metric tons in September, to flood-affected thanas. Overall, more than 74,000 metric tons of wheat and rice were distributed in 1998-99. del Ninno and Dorosh (1999) found that this assistance was well targeted to flood-affected households. Only 11.4 percent of GR recipients were not directly exposed to floods. However, the amount of transfer provided to beneficiaries was small: on average, households received only 10 Tk per month (over a four-month period), which was much

smaller than receipts from private transfers or other government and NGO programs during the same period. In addition, the program did not achieve widespread coverage: overall, 69 percent of flood-affected households did not receive GR transfers.

4.38 In contrast, the VGF program targeted resources to all areas (both flooded and non-flood affected areas) of the country. As a result, while it was not effectively targeted according to flood exposure, it was successful at reaching the poor. Approximately 25 percent of VGF recipients were not directly exposed to the flood but households in the three lowest expenditure quintiles received an estimated three-quarters of the food grains distributed. Overall, VGF assistance was an important component of the total assistance (government, NGO, and private transfers) received by the poor: for the poorest quintile, VGF transfers constituted a substantial 35 percent of total transfers received (del Ninno and Dorosh, 1999; del Ninno and Roy, October 1999).

4.39 In general, the balance between emergency relief and other types of safety nets programs should depend on the specific pattern of risks (e.g., natural disasters, illness, unemployment, old age etc.), the potential vulnerable or high risk groups (e.g., distressed-female headed households, daily wage laborers, children not in school etc.), and potential interventions. While constructing the optimal social safety net is far from an exact science, incorporating some of these elements to regularly assess whether the mix of programs is a good match for the pattern of risks and vulnerable groups in Bangladesh will be a worthwhile exercise. Box 4.7 describes how this ‘modular’ approach has been implemented in Malawi.

Box 4.7. Managing Risk: The Modular Approach to Social Safety Nets

Constructing a social safety net is far from an exact science and the process will vary from country to country depending on the context, data availability, and political urgency. But the process should have certain analytic elements, including establishing the country context, vulnerable groups, and potential interventions; and identifying the optimal mix of programs. Malawi illustrates the mix of preferred programs that can result, depending on prevailing conditions.

Malawi is a low-income country, with more than half its population in severe poverty. The vast majority of the population depends on subsistence agriculture. There is little government revenue surplus to redistribute and limited administrative capacity to manage complex programs. There is no formal social safety net.

Identifying sources of risk and vulnerable groups: Vulnerable groups in Malawi were identified on the basis of a poverty analysis conducted in the early 1990s. Four groups were found to be most at risk: rural households with small landholdings, female-headed households, AIDS orphans and their relatives, and those who could not care for themselves. In addition, four major risks were identified: seasonal price increases and food shortages, periodic drought, large periodic macroeconomic shocks, and the threat of HIV/AIDS. Potential interventions to address these risks were developed.

Identifying the optimal mix of risk management interventions: A cost-effectiveness analysis of existing programs was conducted before potential new interventions were ranked by priority. The results, together with consideration of the vulnerable groups, the risks, and the need to focus on productivity-enhancing interventions, led to the following modular system of programs:

- Public work (risk mitigation and coping)
- Transfers for orphans in poor communities (risk mitigation and coping)
- Nationwide nutrition program (risk reduction and coping)
- Targeted cash transfers to the needy (coping)

Source: Extract from World Bank 2001a, p. 147.

4.40 ***Managing seasonal vulnerability: The case for holding public foodgrain stocks to stabilize prices is weak but targeted programs are still required.*** GOB uses both price stabilization (through open market sales) and targeted safety-net programs to help households cope with seasonal vulnerability. Traditionally, there have been two lean seasons in Bangladesh: the January—March period, and the September—October period that precedes the aman rice harvest. As

discussed earlier, over the last two decades, the stress of the first season has dissipated due to the rapid increase in boro rice and wheat cultivation, and greater market integration, which have both dampened consumer price pressures and created employment opportunities. Significantly dampened rice price seasonality – reduced time between price peaks and now diminished seasonal price spreads – suggests less need for public efforts at seasonal price stabilization, and correspondingly lower requirements for public foodgrain stocks (Goletti, 2000).

4.41 Yet, there is a case for targeted assistance programs that deal with pockets of seasonal vulnerability – markets in some regions remain geographically isolated (Chowdhury and Haggblade, 2000), and households such as daily wage laborers in rural areas remain unable to protect consumption levels throughout the year.¹⁹ Currently, the main program that can help households cope with seasonal fluctuations is FFW. However, FFW programs are concentrated in the January to April months (when drier weather permits road building), rather than in the second lean season when the need for a safety-net is more acute. Various options can be explored for reducing vulnerability during the September-October months. First, some of the FFW wheat could be monetized during these months, which would lower prices and have the added benefit that food distributions would not coincide with the wheat harvest, as is currently the case. Second, resources could be shifted from the FFW to the Test Relief program which concentrates transfers during the second lean season following the monsoon season, with additional types of work considered to allow program expansion during these months.

4.42 ***Complementary community-level interventions and incorporation of non-food components can help further improve the impact of food-assisted targeted programs.*** Previous evaluations of the FFE program suggest that the program has had a sizable impact on primary school enrollments, attendance rates and drop-out rates (Ahmed and Billah, 1994; BIDS, 1997; Ravallion and Wodon, 2000; Ahmed and del Ninno, 2001). However, FFE schools have higher student-to-teacher ratios and more crowded classrooms, as a result of which the quality of education is poorer. This points to the need to include complementary financial and technical assistance in order to ensure that student achievement also increases concurrently with higher enrollments.

4.43 Another area where complementary activities will help improve impact is nutritional status. Previous studies have found that several of the targeted programs (e.g., FFW, VGD, and FFE) have significantly increased food consumption and calorie intake at the household level, but did not report noticeable improvement in nutritional status (as determined by anthropometric measurements) of pre-school children (Ahmed, 2000). However, more recent evidence indicates that targeted relief programs do have a significant impact on reducing child malnutrition among the poor (Background paper 7). Complementary community-level interventions (such as improved sanitation, safe water), as well as integration of nutrition awareness training activities directly into targeted programs will help increase the effectiveness of targeted programs in improving the nutritional status of vulnerable groups.

4.44 Finally, another example where participation in food-assistance programs is supplemented with complementary inputs or requirements is the case of the UPVGD and IGVGD programs, where poor disadvantaged women are provided with a grain ration to enroll in an 18 month-program during which they have to comply with a compulsory savings requirement as well as take part in training. Studies conducted on the development impact of the VGD program report that it is targeted to the poor and is perceived to be fair at the local level (e.g. del Ninno, 1998; Sen, 2001). Comparing the socio-economic status of beneficiaries one year after the joining the program and two years after

¹⁹ 2000 HIES data show that daily wage laborers in rural areas consume about 10 percent less rice in the September to November lean season, as compared with other months. These households also have strong temporal variation in wheat consumption (Background Paper 5).

leaving the program—i.e. across a three-year interval—an evaluation conducted by WFP (1997) found that beneficiaries of the VGD program owned more assets (e.g., beds, tin-roofs, clothing), had more savings, and increased access to credit after the program. Importantly, the beneficiaries perceived improvements in their decision-making ability within the family, in the health of their family, and in incomes.

4.45 ***Regular M&E of FFW schemes is needed in order to reduce leakage and improve the quality of infrastructure.*** The need for greater attention to quality of developmental outcomes and complementary inputs has been noted in several studies in the case of the FFW programs. The concept underlying FFW programs is a good one – it is a true safety-net to the extent that the program is self-targeted and that there is a permanent institutional capability for rapid disbursement when needed. At the same time, FFW schemes hold potential to have a positive impact on long-term growth and development in poor communities by virtue of the rural infrastructure developed. However, there have been several concerns about the quality of the infrastructure constructed under the programs (particularly, roads) and the environmental damage caused by roads (Atwood et al., 2000). In addition, a high degree of leakage (30 to 35 percent) means that potential benefits are not fully realized (Ahmed, 2000). In order to improve impact, there is a need for instituting monitoring and evaluation mechanisms to ensure that the quality and effectiveness of infrastructure is improved, and leakage is minimized. Further, strengthening participation of local bodies (or representatives of beneficiaries) during scheme selection and implementation also provides considerable scope for improving the quality and relevance of infrastructure developed through these programs (Ahmed, 2000).

BANGLADESH AND THE MILLENNIUM DEVELOPMENT GOALS		
MDG	Bangladesh's position with respect to the goals	Looking beyond the goals
1. Eradicate Extreme Poverty and Hunger		
Poverty rate	Progress in poverty reduction, with poverty rates declining from 59% to 50% over the last decade.	Poverty rates and absolute numbers still very high; considerable urban-rural and regional disparities; GDP growth at 6-8% needed to cut incidence significantly
Prevalence of child malnutrition	Progress in reducing child malnutrition, with prevalence of stunting, wasting and underweight reduced by 20-25% between 1989-90 and 2000.	Significant challenges remain: close to half the children stunted or underweight. Integrated approach across sectors needed to maintain rate of progress. This should include creating knowledge of health practices
2. Achieve Universal Primary Education		
Net primary enrollment ratio	Large increase in enrollment rates in 80s-90s. Survey-based estimates show stagnation in enrollment during second half of 90s	Need to improve quality of education; problems of governance continue to plague the system
Literacy rate	12.5 percentage points improvement over the last decade, but the literacy rate continues to be extremely low (45% of adults 7 years and older)	Universal coverage of primary level education important tool to boost literacy rates; adult literacy programs need better delivery system
3. Promote Gender Equality and Empower Women		
Ratio of girls to boys in primary & secondary	Close to or above parity	Decline in boys' (aged 6 – 15 years) enrollment indicated by recent surveys is cause for concern
Wage employment	Progress in increasing women's participation in public life and in the formal labor market	Female labor force participation continues to be quite low
		Removal of discrimination against women in family matters (inheritance, marriage, divorce, etc.)
4. Reduce Child Mortality		
Infant mortality rate	Drop in IMR from 87 in 1989-93 to 66 in 1995-99	Large disparities across income groups
Under 5 mortality rate	Decline in CMR from 133 to 94 over the period	
5. Improve Maternal Health		
Maternal mortality rate	At 392 per 100,000 live births, MMR among highest outside Sub-Saharan Africa.	Cross-sectoral approach needed (including behavioral change and massive training of midwives, given that 95% deliveries occur at home) to lower mortality rates
Births attended by skilled health staff	Extremely low, around 12% in 1999-00	
6. Combat HIV/AIDS, Malaria, and Other Diseases		
HIV, malaria, and other diseases	HIV rates relatively low; progress achieved in preventing small pox, cholera, and malaria; leprosy and polio eliminated	Factors associated with HIV epidemics in other countries present in Bangladesh. Significant challenges remain to breaking cycle of water-borne diseases
Contraceptive Prevalence rate	20 percent increase in prevalence between 91-97 (in 96/97, 49% used any method, including 42% using modern methods) Fertility rates have leveled at 3.3	Promising approaches to further curb population growth include: influencing age at which women get married; diversifying availability of modern contraceptives and improving knowledge regarding use of pills.
7. Ensure Environmental Sustainability		
Access to improved water sources	Remarkable progress achieved by spreading tube-wells to virtually the entire population	Rapid urbanization poses new challenges. Arsenic contamination threatens gains achieved
GDP per unit of energy use (PPPS per kg oil eq.)	The lowest among South Asian countries	Only 30% of the population has access to electricity. Structural reforms in the energy sector needed
8. Develop a Global Partnership for Development		
Official Development Assistance	Official development assistance to Bangladesh has declined from 6.9% of GNP in 1990 to 2.7% in 1998	Ongoing PRSP process offers important opportunities to identify key obstacles to poverty reduction, prepare plans to overcome them, strengthen partnerships with donors, and improve coordination.

Sources: Bangladesh Demographic and Health Surveys, Household Income and Expenditure Surveys, Education Watch Study, Bangladesh Human Development Report, World Development Reports.

5. SCORING PROGRESS

5.1 Initiating the preparation of its PRSP, Bangladesh encounters an unprecedented opportunity to draw on widespread backing for the process of devising a long-term comprehensive strategy for poverty reduction. Not only are various domestic agents of change such as the government, civil society, and the academic community resolutely engaged; the entire international community has also pledged full support to the process. Following the recent Parliamentary elections, there is a strong political impetus for change. Poverty reduction is agreed upon as the overarching development goal, and as part of this effort, GOB has pledged its full commitment to achieve the Millennium Development Goals (MDGs).

5.2 Looking back, as this report documents, Bangladesh has made considerable progress in reducing poverty and vulnerability during the nineties. Poverty incidence fell by about 9 percentage points over the past decade, faster than in any other period of the country's history and in sharp contrast to the virtual stagnation of the eighties.¹ Non-income poverty, as measured by factors such as malnutrition and infant and child mortality, also declined considerably. Vulnerability, particularly with regard to food insecurity and natural disasters, is much improved. At the same time, the list of unfinished business in reducing poverty and improving human development remains long. How does the progress in Bangladesh over this period compare to other countries? Given the performance over the last decade, is Bangladesh on-track to achieve the MDGs by 2015?

LOOKING BACK: COMPARING BANGLADESH TO SOUTH ASIA AND EAST ASIA:

5.3 *Bangladesh's pace of poverty reduction compares favorably with its South Asian neighbors.* The reduction in poverty in Bangladesh during the nineties compares favorably with movement in other countries in the region. In India, where the economy grew at close to 6 percent per annum during the nineties, consensus is emerging that poverty declined by roughly 5-10 percentage points in the 6 year period between 1993-94 and 1999-00, a magnitude similar to that observed in Bangladesh. However, in Pakistan where the rate of GDP growth has slowed considerably in the latter part of the nineties, recent evidence suggests that poverty more or less stagnated during the decade. And in Sri Lanka, poverty declined at a considerably slower pace, by 6 percentage points between 1985 and 1995.

Table 5.1. Bangladesh and South Asia: Comparison of Selected Indicators of Child Nutrition

Nutrition Status	Bangladesh	India	Pakistan	Sri Lanka
Indicator	1999-00	1998-99	1990-91	1987
Stunting (height-for-age)				
% below 2 std. Deviations	50	57	57	34
% below 3 std. Deviations	20	32	36	-
Wasting (weight-for-height)				
% below 2 std. Deviations	9	13	10	13
% below 3 std. Deviations	1	2	1	-
Underweight (weight-for-age)				
% below 2 std. Deviations	56	58	46	48
% below 3 std. Deviations	17	24	19	-

Source Various DHS Reports. For comparability, comparison limited to children 24-35 months (24-36 for Sri Lanka).

¹ Earlier World Bank estimates show poverty in Bangladesh to have been stagnant at 59 percent between 1983-84 and 1991-92 (World Bank 1999a). Similarly, Ravallion & Sen (1996) estimate that rural poverty in Bangladesh declined only marginally from 54 percent in 1983-84 to 53 percent in 1991-92.

5.4 How do non-income indicators of living standards in Bangladesh compare to other countries? Using measures of stunting, wasting, and children underweight from Demographic and Health Surveys carried out in India and Bangladesh in 1998-99 and 1999-00 respectively, Bangladesh compares favorably with India (Table 5.1). Comparisons with Pakistan and Sri Lanka are more mixed. While Bangladesh has lower rates of stunting and wasting than Pakistan, the percentage of underweight children is far greater.

5.5 As far as other development indicators are concerned, Bangladesh, with a lower GNP per capita, has done reasonably well on some dimensions but lags with respect to others when compared with other South Asian countries (Table 5.2). It has lower population growth and mortality rates than both India and Pakistan. Access to improved water supply is better in Bangladesh, although, as noted earlier, this success is being threatened by arsenic contamination of groundwater. Adult literacy remains a problem area relative to other countries, although Bangladesh has made significant strides in improving gender parity in enrollments.

Table 5.2. International Comparisons of Selected Development Indicators

Indicator	Bangladesh	China	India	Pakistan	Thailand	Vietnam
GNP per capita: US\$	370	780	450	470	1,960	370
Population growth: %	1.6	1.1	1.8	2.5	1.2	1.8
Urban population: % of total	24	32	28	36	21	20
Health						
Male life expectancy at birth: years	58	68	62	61	70	66
Infant mortality: per 1,000 live births	73	31	70	91	29	34
Under-5 mortality rate: per 1,000	96	36	83	120	33	42
Access to water and sanitation (% of population with access)						
Access to improved water source	84	90	81	60	89	36
Access to sanitation	35	21	16	30	96	21
Literacy and Education						
Male illiteracy: % of age 15 & older	49	9	33	42	3	5
Female illiteracy: % of age 15 & older	71	25	57	71	7	9
Net primary school enrollment	75	100	77	..	88	100

Source: World Development Indicators. Estimates are from 1999, or most recent estimates reported in the Database.

5.6 ***However, Bangladesh's East Asian neighbors may be a better example of latent possibilities.*** While cross-country comparisons always require some care, the recent experiences of Vietnam, a country with the same GNP per capita as Bangladesh, may point to what is attainable. Between 1993 and 1998, Vietnam experienced a 21 percentage point drop in poverty, spurred in large part by an ambitious reform program that included land reform, liberalization of agricultural input and output markets, freeing up the informal sector, and equitable investments in human capital.² Between 1992 and 1998, the average annual GDP growth rate in Vietnam was a spectacular 8.4 percent, with agricultural growth averaging 4.5 percent, industrial growth 13 percent, and the services sector growing by 8 percent per annum. In addition to progress in reducing consumption-based poverty, Vietnam also achieved substantial progress in education and health, reaching levels now comparable to those of other, much higher-income East Asian countries. While Bangladesh has made noteworthy progress during the past decade, the country has the potential to realize considerably greater gains in living standards. Vietnam's experience suggests that Bangladesh could gain substantial poverty reduction through further reforms and institutional development.

² See World Bank (1999b) for more details on progress in Vietnam during this period.

LOOKING AHEAD: PROGRESS TOWARD MEETING THE MILLENNIUM DEVELOPMENT GOALS:

5.7 The MDGs sets targets for reducing poverty, improving health and education, and protecting the environment (see box). Based on Bangladesh's progress over the last decade and its various deep-seated problems, what will it take to achieve these goals?

5.8 The MDG poverty aim is to reduce the proportion of people living in extreme poverty and the proportion of malnourished children at least in half by 2015. As noted in Chapter 2, simple simulations based on Bangladesh's track record of growth and poverty reduction over the nineties indicate that to attain the goal of halving current poverty levels by 2015 economic growth would have to accelerate to over 6 percent per annum. To the extent that growth is more pro-poor than in the past (when urban areas experienced high growth, but mainly among the rich), its impact on poverty would be even larger. As various parts of the report observe, growth can be made more pro-poor through concerted efforts to help build the assets of the poor, and to provide the complementary public assets and enabling environment to help raise returns to their assets.

5.9 But even pro-poor growth by itself will not be enough to achieve all the MDGs. Simulations based on the Child Nutrition Survey data show that given current high levels of child malnutrition, Bangladesh cannot possibly meet the MDG target of halving malnutrition rates by 2015 from the impetus of foreseeable economic growth alone (Background Paper 7). To meet the target would require per capita income to increase at an annual rate of 5 percent. Considering that per capita GDP grew by about 1.8 percent per year between 1980 and 1990 and 3.1 percent between 1990 and 2000, such a boom appears to be extremely unlikely. Other interventions discussed in Chapter 3, such as better targeting of nutrition interventions, improved infrastructure, and emphasis on fostering behavioral change through communication, will be necessary – indeed, critical – to shrink the incidence of malnutrition by half.

5.10 Allocating public resources to priority sectors such as child nutrition, education and health is important to build human capital, but higher resource allocations in and of themselves are not enough: how these resources are used is also of crucial importance. Acknowledging that government policies and public expenditure allocations in Bangladesh have been rightly focused on human development, the report nonetheless finds that their efficacy has been well below potential. As a result, while Bangladesh has made notable progress over the long-term in raising enrollment and attaining gender parity, adult literacy rates remain low. Moreover, household surveys suggest that in recent years enrollments may have tapered off (or, worse still, fallen); in addition, the poor quality of education that the system provides is generating increasing concern. Outstanding health challenges are also massive, particularly in relation to maternal health and provision of good quality curative care for the poor. To meet the education and health MDG targets demands the urgent adoption of major changes that can improve the quality of education and health care. Similarly, among the most important findings of the report is the need for effective reform of the safety net programs to reduce leakage and to help improve their effectiveness in protecting the consumption of the poorest.

5.11 Progress in promoting gender equity and empowerment of women in Bangladesh has been laudable. Gender gaps in health and education have largely been eliminated. Sri Lanka is the only other country in South Asia that can boast similar successes. Micro-credit directed to women has strengthened their bargaining position, increased their physical mobility, boosted their self-confidence, and increased their participation in public life. The boom in the textile and apparel industry that has been an important source of salaried employment for women has brought better pay, more status, and a sense of pride and empowerment at being able to provide for their families. However, deterioration

in law-and-order also adversely impacts women's labor force participation, and, as noted above, is in urgent need of attention. Other issues of relevance with regard to promoting gender equality in Bangladesh include designing concerted measures to reduce violence against women and removing the discrimination that women encounter in areas such as inheritance, marriage, and divorce law.

LOOKING AHEAD: EMERGING RESEARCH AGENDA AND IMPROVING M&E SYSTEMS:

5.12 This report is part of a long-term capacity-building effort initiated in late 1994. The World Bank and Asian Development Bank have worked with staff at the Bangladesh Bureau of Statistics (BBS) to help expand and enhance the information base on poverty. Extensive technical assistance and grant funding has been provided to help strengthen the National Accounts system as well as to enhance BBS's Household Expenditure Survey (HES) series. The HIES, labor force, and child nutrition surveys have provided the primary database for much of the analysis presented in these pages. Following completion of the poverty assessment report, several dissemination activities are planned to help inform the preparation of the I-PRSP in Bangladesh. The findings of a number of background papers – on which this report draws heavily – were discussed at a workshop in Dhaka in November 2001 attended by GOB staff, members of the I-PRSP preparation team, and academics and researchers. In addition, three seminars were held in May, June, and November 2002 in Dhaka, Washington, and Manila respectively to share the main findings of this report with the extended country teams working on Bangladesh with the view to improving the effectiveness of Bank operations. Finally, a workshop was also held in Dhaka in October 2002 to present the main findings of the report to a wide range of stakeholders in Bangladesh.

5.13 The analysis in this report has yielded a number of insights on how growth can be made more pro-poor. While the great variety in income strategies and asset holdings of the poor makes it clear that no single or singular remedy will reduce poverty, several guidelines for the design of a pro-poor growth strategy do emerge. The chief asset for the poor is their labor, so the need to invest soundly in building human capital is clear. With 85 percent of the country's poor continuing to live in rural areas, accelerating agricultural growth through both intensification and diversification is crucial. Poor households would benefit greatly from expansion in opportunities for daily wage and salaried work in the rural non-farm sector. Many of these opportunities are likely to come from small enterprises, for which ongoing experiments in extending coverage of micro-credit beyond its current clientele (e.g. adapting and combining it with other forms of assistance for the very poor, extending coverage to the "missing-middle") hold much promise. Finally, more attention is needed to create and maintain a more enabling environment for growth. Sound macroeconomic management and improvements in law-and-order are important prerequisites for establishing such an environment. Continued improvements in rural infrastructure will be important both for developing a modern agriculture sector and for spurring non-farm growth. In addition, governance reforms aimed at improving public administration and devolving power to representative and accountable local institutions will help create a more open environment in which the poor can access opportunities and build assets according to their own specific needs and circumstances.

5.14 Several unanswered questions and puzzles that have surfaced in the report merit further research and investigation over the coming months. The report has documented the varying patterns of growth and poverty reduction across different parts of the country, but more in-depth research is needed to better understand the structural causes underlying this differential pattern. Even though growth in rural areas during the nineties was slower than in urban areas, it was more broad-based, as a result of which the overall decline in poverty was equivalent across the two sectors. By contrast, not only does growth in Chittagong region appear to have been slower than in other parts of the country; it

was also concentrated among the relatively affluent, with the result that poverty rates in the division were virtually stagnant during the nineties.

5.15 Further analysis is also needed to better understand the nature and causes of migration trends in Bangladesh (both across regions and across rural-urban sectors). Notwithstanding the observed stagnation in urban poverty rates in recent years, living standards appear to be considerably higher in urban as compared to rural areas (as suggested by greater consumption of higher-value food items by the urban poor compared to the rural poor). Further, the influx of migrants from rural to urban areas of Bangladesh appears to have continued unabated through the nineties. Important topics for future research include investigating the extent and nature of migration trends (what types of individuals moved? what jobs were they engaged in before moving to urban areas?, what types of jobs did they take up in their new residence?, etc.), as well as the possible impact of such behavior on the pattern on poverty reduction.

5.16 Finally, the analysis of trends and patterns of enrollment across the country presented in this report has in turn raised several important questions meriting further investigation. Why have different regions made different progress in raising enrollments? What is the relationship between the level of enrollment and quality of education that the system provides? Why do children in Bangladesh start school at a late age? -- would efforts to encourage children to start school at an earlier age help raise their overall educational attainment? Finding answers to these and other such questions will no doubt play an important role in better understanding how Bangladesh can best attain the important MDG target of universalizing basic education.

Better Information Systems For Monitoring and Evaluation:

5.17 Good information systems need to be developed and maintained to insure that accurate information is available to policymakers and to promote accountability. Whether to assess prevailing conditions, identify high-priority issues for public action, design responsive interventions, or simply track progress in implementing reform measures, timely, high-quality, and easily accessible data play a fundamental supporting role. Notwithstanding the relatively good database that already exists in Bangladesh for monitoring important poverty and social development indicators,³ several constraints impede the effective use of available data in the decision-making process. Considerable gains in reliability and timeliness could come from extending many of the good practices adopted for the HIES (e.g. team-based data collection approach, field-based data entry and quality control checks) to other surveys conducted by BBS. A clearly articulated information and disclosure policy is needed with regard to use of disaggregated data from surveys. Currently the large volume of data routinely collected by BBS are grossly under-utilized, with many institutions, think-tanks, and researchers often unable to exploit its full potential. This lack of access to data often forces institutions and donors to engage in time-intensive and costly data collection efforts, thus diverting precious analytic and financial resources into data collection at the expense of analysis. Opening up access to unit-record data from these surveys to the general public – as has recently been done in India and Nepal – will help facilitate their greater use. In order to further enhance the integrity and credibility of the data collected, the BBS and

³ In addition to the various data sources used in this report, various government agencies also maintain an extensive database on a number of sector-specific indicators. For instance, the Bangladesh Bureau of Educational Information and Statistics (BANBEIS) database includes geographically disaggregated information on schools, teachers and other important inputs, as well as on enrollments of children by grade and gender. Data on morbidity and mortality are produced through the Bangladesh Health and Demographic Surveys (BHDS) conducted by the Ministry of Health and Family Welfare in collaboration with BBS. Other independent (or semi-autonomous) data collection initiatives include the National Institute of Population Research and Training's (NIPORT), Bangladesh Demographic and Health Surveys (DHS), or the Helen Keller International's Nutrition Surveillance Project, which provide extensive data on health, family planning, and nutrition processes and outcomes.

other statistical units in government need greater autonomy (see Box 5.1 for the Indian experience in this respect).

Box 5.1: Reform of the Statistical System in India

India is undertaking wide ranging reform of its statistical system. A National Statistical Commission was appointed by the Government of India in 2000 to examine the statistical system of India to identify deficiencies and weaknesses in the current system and make recommendations accordingly. Among the various reforms proposed as a pre-requisite to improving the system the Commission has recommended establishing a permanent, statutory National Commission on Statistics to serve as a nodal policy-making body for all statistical activities in the country. Taking similar steps in Bangladesh to establish priorities for the statistical system, as well as to help safeguard it against possible political pressure not to report information unfavorable to the government in power merits serious consideration.

5.18 Work is currently underway on a project within BBS and the Ministry of Planning to develop a National Databank, with the long-range intent of providing an integrated database system accessible to all government departments and agencies. Large discrepancies often mark data available from different sources, for instance school enrollment estimates by Primary and Mass Education Division compared to those from the Education Watch survey or the 2000 HIES. Greater independence from political interference coupled with concerted efforts to better reconcile the at-times contradictory data would help restore the various information systems to their rightful role as effective management information tools. As part of the process of forging consensus on a comprehensive set of national development indicators within the ongoing PRSP, there is need to specify clearly the data sources through which each indicator will be monitored, as well as the desired periodicity of data collection. The indicators chosen should be such that a lay person can easily understand and use them. If such indicators are made available in the public domain, and widely discussed at public meetings across the country to assess progress and constraints, the M&E system will play a very valuable role in raising public consciousness about the development constraints faced by the country, as well as in devising strategies to overcome them.

5.19 As in many developing countries, GOB has very limited capacity to measure the development impact of fiscal expenditures, and most agencies are preoccupied with reporting how inputs have been used rather than highlighting outcomes achieved.⁴ The Implementation Monitoring and Evaluation Division (IMED), Ministry of Planning, is mandated to monitor and evaluate development projects. As a watchdog body of the executive branch, it monitors project implementation and provides a completion report for every project that is closed out.⁵ After findings from the completed evaluation work are presented to the ministries concerned, they, in turn, note the flaws in their project design and implementation. Hoping to learn and improve, a few ministries have even asked IMED to carry out benefit evaluation for their projects. However, the undermanned evaluation unit in IMED needs strengthening if it is to be able to meet this demand.⁶ Several other initiatives are currently underway in

⁴ Extract from the World Bank, 2002a.

⁵ On average, there are 1200 projects, new and ongoing, in the portfolio, and close to 200 are completed every year. Based on its monitoring, IMED provides feedback to the line ministries on a monthly basis. More formal reports, including PCRs, are presented to the National Economic Council (NEC), which is chaired by the Prime Minister and has other ministers and secretaries as members. IMED started doing project evaluation (including beneficiary surveys) in 1995/96.

⁶ The unit lacks adequate qualified manpower to carry out the evaluations. Even if a small sample of all the completed projects in a year are selected from critical sectors for impact evaluation, the Evaluation Unit is ill-equipped to carry out this task. Another related problem is the less than satisfactory quality of evaluations. Also, IMED has no enforcement function. If a line ministry ignores its advice and recommendations -- a routine practice - it has no recourse to follow up.

Bangladesh to gauge the satisfaction with public services.⁷ The success of these initiatives will depend on public agencies embracing greater transparency and taking corrective actions.

5.20 Under the draft I-PRSP, the establishment of an institutional focal point in the Planning Commission with strong inter-ministerial linkages for effective poverty monitoring and tracking of progress is envisaged as a high priority need. Along with monitoring I-PRSP progress and outcome indicators, and using poverty diagnostics to set medium and long-term outcome-oriented targets, the unit is expected to engage periodically in consultations with civil society and stakeholders. In addition, civil society initiatives for monitoring poverty are also being considered with the aim of obtaining independent assessments of trends in poverty and poverty reduction policies (GOB 2002). These renewed efforts to strengthen monitoring and evaluation systems in Bangladesh provide an excellent opportunity to implement the various reforms discussed above. If they are implemented successfully, that progress will go a long way in further improving the quality of information and analysis for decision-making and in inculcating a stronger results orientation within government.

⁷ These follow the example of the first “Score-cards” survey conducted in 1994 by a Public Affairs Center (PAC), an independent NGO in Bangalore, Karnataka covering accessibility and usage, satisfaction with individual services, responsiveness of service providers, cases of bribes, and willingness to pay for better services. Three NGOs in Bangladesh initiated similar surveys: Action Aid is developing in-house capacity to prepare report cards at the city and division levels; Democracy Watch is looking at service delivery issues in Chittagong City Corporation and (in partnership with Transparency International-Bangladesh) is preparing a manual in Bangla for division-level score cards; and Power and Participation Research Center (PPRC) is also preparing reports on best practices at the local government level, based on a nationwide survey and a report card on Dhaka city.

TECHNICAL APPENDIX:**Poverty Lines and Poverty Measures**

This report uses the cost-of-basic-needs method for estimating poverty, whereby any household with per capita expenditure below a given poverty line is considered as poor. The poverty estimates presented in this report are the official poverty estimates reported in the 2000 HIES Preliminary Report issued by the Bangladesh Bureau of Statistics, and were derived collaboratively by BBS and the World Bank. In April 2001, the BBS and World Bank teams started work independently on computing poverty estimates using the 2000 HIES data. At a series of small workshops in August 2001 at BBS, where staff from the Planning Commission and independent experts also participated, both teams presented their respective findings. Both sets of poverty estimates were found to be very close to one another, following which minor differences in methodology were reconciled.

This appendix focuses on the steps followed for estimating the poverty lines used in the cost-of-basic-needs method, especially since the methodology used in this report and by BBS has changed slightly compared to that used earlier. In its 1995-96 HES report, BBS re-estimated poverty lines for each year separately using the methodology described below for the base year. However, one of the disadvantages of this approach is that it does not guarantee that the poverty lines calculated across years represent basic-needs bundles of constant value. In particular, if living standards in a country improve over time, and even poor households spend a larger share of their income on non-food items, the allowance made for these items in the poverty line increases over time as well. The current methodology is superior in that it ensures that comparisons of poverty rates over time are based on poverty lines that are held constant in real value terms.

The appendix also discusses various measures (headcount, poverty gap, and squared poverty gap) which can be used to estimate poverty.

1. The Cost of Basic Needs Method

With the cost of basic needs (CBN) method, poverty lines represent the level of per capita expenditures at which the members of a household can be expected to meet their basic needs (food consumption to meet their caloric requirement, but also non-food consumption). Making comparisons of poverty rates over time requires that the basic-needs bundles used to estimate poverty lines in different years are of constant value in real terms. In order to ensure this, CBN poverty lines were first estimated for a base year, chosen to be 1991-92, and then updated to 1995-96 and 2000 for changes in the cost-of-living using a price index. As prices of some goods and services may vary between geographical areas in Bangladesh, poverty lines were estimated at a disaggregated level. Specifically, the country was divided into 14 different geographic areas (9 urban and 5 rural).¹ The method followed for estimating the 1991-92 regional CBN poverty lines and the price indices are described below.

1.1 Estimating the Base Year CBN Poverty Lines

Three steps were followed for estimating what it cost a household to meet its basic needs in the base year. First, the cost of a fixed food bundle was estimated. The bundle consists of eleven items: rice, wheat, pulses, milk, oil, meat, fresh water fish, potato, other vegetables, sugar, and fruits. It provides minimal nutritional requirements corresponding to 2,122 kcal per day and person, the same threshold

¹ The 14 regions used comprised: 1. Dhaka SMA, 2. Other urban areas of Dhaka division, 3. Rural areas of Dhaka and Mymensingh, 4. Rural areas of Faridpur, Tangail, and Jamalpur, 5. Chittagong SMA, 6. Other urban areas of Chittagong division, 7. Rural areas of Sylhet and Comilla, 8. Rural areas of Noakhali and Chittagong, 9. Urban areas of Khulna division, 10. Rural areas of Barishal and Pathuakali, 11. Rural areas of Khulna, Jessore, and Kushtia, 12. Urban areas of Rajshahi, 13. Rural areas of Rajshahi and Pabna, and 14. Rural areas of Bogra, Rangpur, and Dinajpur greater districts.

used to identify the absolute poor with the direct caloric intake method. Prices for each item in the bundle were estimated for each of the fourteen geographic areas. In order to capture the price paid by the poor for each food item, regressions were used to control for the impact of household characteristics such as total consumption, education, and occupation on the quality of the food consumed (better off households buy more expensive food than the poor). Denoting the required quantities in the food bundle to meet the caloric requirement by (F_1, \dots, F_N) , where F_j is the required per capita quantity of food item j , food poverty lines were computed as $Z_{kf} = \sum P_{jk} F_j$. In this equation, the nutritional needs are the same for all areas, but the prices for each item are area-specific, with the subscript k referring to area k .

The second step entailed computing two non-food allowances for non-food consumption. The first was obtained by taking the average amount spent on non-food items by those households whose total consumption was equal to their food poverty line Z_{kf} . These households spend less on food than the food poverty line. Hence what they spend on non-food items must be devoted to bare essentials. Algebraically, denoting total per capita consumption of household i by y_i and food per capita consumption by x_i , the "lower" allowances for non-food consumption were estimated as $ZL_{kn} = E[y_i - x_i \mid y_i = Z_{kf}]$, where E is the expectation statistical symbol. Second, "upper" allowances for non-food consumption were estimated by taking the amount spent on non-food items by those households whose food expenditure was equal to the food poverty line (these households do meet their food requirement). These upper allowances for non-food items can be expressed as $ZU_{kn} = E[y_i - x_i \mid x_i = Z_{kf}]$. Because the share of food expenditures in total consumption decreases as consumption increases, ZU_{kn} is larger than ZL_{kn} .

The third step in the estimation of the poverty lines consisted simply in adding to the food poverty lines the lower and upper non-food allowances to yield the total lower and upper poverty lines for each of the 14 geographical areas:

$$\text{Lower poverty line: } ZL_k = Z_{kf} + ZL_{kn}, \text{ where } ZL_{kn} = E[y_i - x_i \mid y_i = Z_{kf}]$$

$$\text{Upper poverty line: } ZU_k = Z_{kf} + ZU_{kn}, \text{ where } ZU_{kn} = E[y_i - x_i \mid x_i = Z_{kf}]$$

Thus, within each area, the estimates of the cost of basic food needs are the same with the lower and upper poverty lines. The difference between the two lines is due to the difference in estimation of the allowances for non-food consumption. The lower poverty line incorporates a minimal allowance for non-food goods (the typical non-food spending of those who could just afford the food requirement) while the upper poverty line makes a more generous allowance (the typical non-food spending of those who just attained the food requirement).

1.2 Updating Poverty Lines for Changes in Cost-of-Living

Price indices for updating the 1991-92 CBN poverty lines to 1995-96 and 2000 were derived by combining price information available in the HES datasets and the non-food CPI. The HES data provide price information on food items and fuels that account for approximately two-thirds of total household expenditure. Inflation of non-foods that cannot be calculated from the HES surveys was estimated by the non-food component of the CPI.

The HES-based price indices were derived in four steps. First, expenditures on various items in the HES were divided into 14 groups. These groups were chosen so as to retain as much disaggregation as possible (to minimize heterogeneity within categories) as well as to be comparable across the three survey years. Second, unit values (by dividing expenditures by quantity) of the most commonly consumed item within each of the expenditure groups were calculated for each household. For each group, the median of the unit values within each geographic region was calculated. Using the price of

the most commonly consumed item within each group and medians (which are more robust to outliers as compared to means) for the summary region-specific unit values helped minimize the problem that the calculated unit values are contaminated by choice of quality rather than providing information on market price alone. Third, average budget shares of the 14 main expenditure groups were calculated for each survey year. Finally, region-specific Törnqvist price indexes were then calculated using budget shares of the expenditure groups along with median prices of the selected items. The Törnqvist price indices for each region k were calculated as follows:

$$\ln P_{10}^{Tk} = \frac{\sum_{j=1}^n w_{1j}^k + w_{0j}^k}{2} \ln \left[\frac{\text{TM}P_{1j}^k}{\text{TM}P_{0j}^k} \right]$$

where P^{Tk} denotes the Törnqvist price index for region k , 1 and 0 denote the two years of comparison, w_{1j}^k and w_{0j}^k are the respective budget shares, and p_{1j}^k and p_{0j}^k are the respective prices for good j in the two years of comparison.

Once the HES-based price indexes for each region had been derived from the survey data, a weighted average of these and the non-food CPI (disaggregated by urban and rural sectors) was taken to derive region-specific cost-of-living indices for 1995-96 and 2000-01, the relative weights being the budget shares of covered goods in each region for the HES price index, and balance (i.e. one minus these budget shares) for the non-food CPI. The composite price indices were then used to update the 1991-92 CBN poverty lines to 1995-96 and 2000-01.

2. Alternative Poverty Measures

Once the poverty lines have been estimated, several poverty measures can be used to measure the extent of deprivation. The most standard measures are the so-called FGT measures (Foster et. al., 1984). The incidence of poverty is measured by the headcount index, which is simply the percentage of the population living in households with a per capita consumption below the poverty line. The depth of poverty is measured by the poverty gap index, which estimates the average distance separating the poor from the poverty line as a proportion of that line (the mean is taken over the whole sample with a zero distance allocated to the households who are not poor.) The severity of poverty is measured by the squared poverty gap index, which takes into account not only the distance separating the poor from the poverty line, but also the inequality among the poor. All three measures can be represented with the following equation:

$$P_{\alpha} = \sum [(z-y)/z]^{\alpha} / N \text{ with } \alpha=0, 1, \text{ or } 2$$

The headcount index corresponds to $\alpha=0$, the poverty gap to $\alpha=1$, and the squared poverty gap to $\alpha=2$.

APPENDIX TABLES AND FIGURES

Table A1.1. GDP and Employment in Bangladesh during the 1990s

	Gross Domestic Product		Labor Force		Output per Worker	
	Share (1999/00)	Change FY91-FY00	Share (1999/00)	Change FY91-FY00	Tk. Value (1999/00)	Change FY91-FY00
Agriculture	25%	33%	62%	10%	15,524	20%
Industry	26%	86%	10%	-5%	95,073	97%
Services	49%	50%	28%	44%	67,031	4%
<i>Overall</i>	<i>100%</i>	<i>52%</i>	<i>100%</i>	<i>16%</i>	<i>37,883</i>	<i>32%</i>

Table A1.2. Composite Price Indices: 1991/92 – 1995/96 and 1995/96 – 2000

REGION	1991-92 to 1995-96				1995-96 to 2000			
	Food HES Index	Covered budget sh.	Non-Food CPI	Composite Price Index	Food HES Index	Covered budget sh.	Non-Food CPI	Composite Price Index
SMA Dhaka	1.20	59%	1.20	1.20	1.10	53%	1.16	1.13
Other Urban Dhaka	1.20	68%	1.20	1.20	1.03	60%	1.16	1.08
Rural Dhaka	1.12	74%	1.26	1.16	1.07	72%	1.20	1.11
Rural Faridpur Tangail Jamalpur	1.08	79%	1.26	1.12	1.07	74%	1.20	1.12
SMA Chittagong	1.20	62%	1.20	1.20	1.09	59%	1.16	1.12
Other Urban Chittagong	1.20	67%	1.20	1.20	1.09	60%	1.16	1.12
Rural Sylhet Comilla	1.12	77%	1.26	1.15	1.11	71%	1.20	1.15
Rural Noakhali Chittagong	1.17	73%	1.26	1.19	1.06	67%	1.20	1.11
Urban Khulna	1.12	67%	1.20	1.14	1.06	62%	1.16	1.10
Rural Barishal Pathuakali	1.17	77%	1.26	1.19	1.05	70%	1.20	1.10
Rural Khulna Jessore Kushtia	1.16	73%	1.26	1.19	0.98	69%	1.20	1.05
Urban Rajshahi	1.07	67%	1.20	1.11	1.08	61%	1.16	1.12
Rural Rajshahi Pabna	1.13	73%	1.26	1.17	1.04	71%	1.20	1.10
Rural Bogra Rangpur Dinajpur	1.04	75%	1.25	1.10	1.01	70%	1.20	1.09

Source: BBS and World Bank staff estimates.

Table A1.3. CBN Poverty Lines used to compute the Poverty Measures

REGION	1991-92		1995-96		2000	
	ZL	ZU	ZL	ZU	ZL	ZU
SMA Dhaka	480	660	574	791	649	893
Other urban Dhaka	399	482	480	580	521	629
Rural Dhaka	425	512	492	593	548	659
Rural Faridpur Tangail Jamalpur	432	472	484	529	540	591
SMA Chittagong	523	722	627	867	702	971
Other urban Chittagong	517	609	619	730	694	818
Rural Sylhet Comilla	432	558	499	644	572	738
Rural Noakhali Chittagong	438	541	522	645	582	719
Urban Khulna	482	635	552	727	609	803
Rural Barishal Pathuakali	413	467	494	558	546	616
Rural Khulna Jessore Kushtia	420	497	499	592	527	624
Urban Rajshahi	446	582	496	647	557	726
Rural Rajshahi Pabna	459	540	535	630	586	690
Rural Bogra Rangpur Dinajpur	426	487	468	535	510	582

Source: BBS and World Bank staff estimates.

Note: ZL is the lower poverty line; ZU is the upper poverty line. Amounts are in Tk. per person per month.

Table A1.4. Trends in Nominal and Real PCE: National and Sectoral

	Mean per-capita expenditures (Tk. per month)			Change (Percent)		
	1991-92	1995-96	2000	1991-92 to 1995-96	1995-96 to 2000	During the Decade
	NOMINAL PCE:					
National	550	764	876	39%	15%	59%
Urban	829	1,344	1,390	62%	3%	68%
Rural	503	649	747	29%	15%	49%
REAL PCE:						
National	550	657	677	20%	3%	23%
Urban	829	1137	1049	37%	-8%	27%
Rural	503	562	583	12%	4%	16%

Source: World Bank staff estimates.

Table A1.5. Share of household budget allocated to food items

Nominal Tk per Person per month	Overall Population			Bottom 40%		
	1991-92	1995-96	2000	1991-92	1995-96	2000
PCE	550	764	876	326	427	473
PCE Food	353	432	463	236	287	305
PCE Non-Food	197	332	413	89	140	168
Share of PCE on food	64.2	56.5	52.8	72.6	67.2	64.6

Source: World Bank staff estimates.

Figure A1.1. Cumulative Distributions of monthly real PCE: National, Urban, and Rural

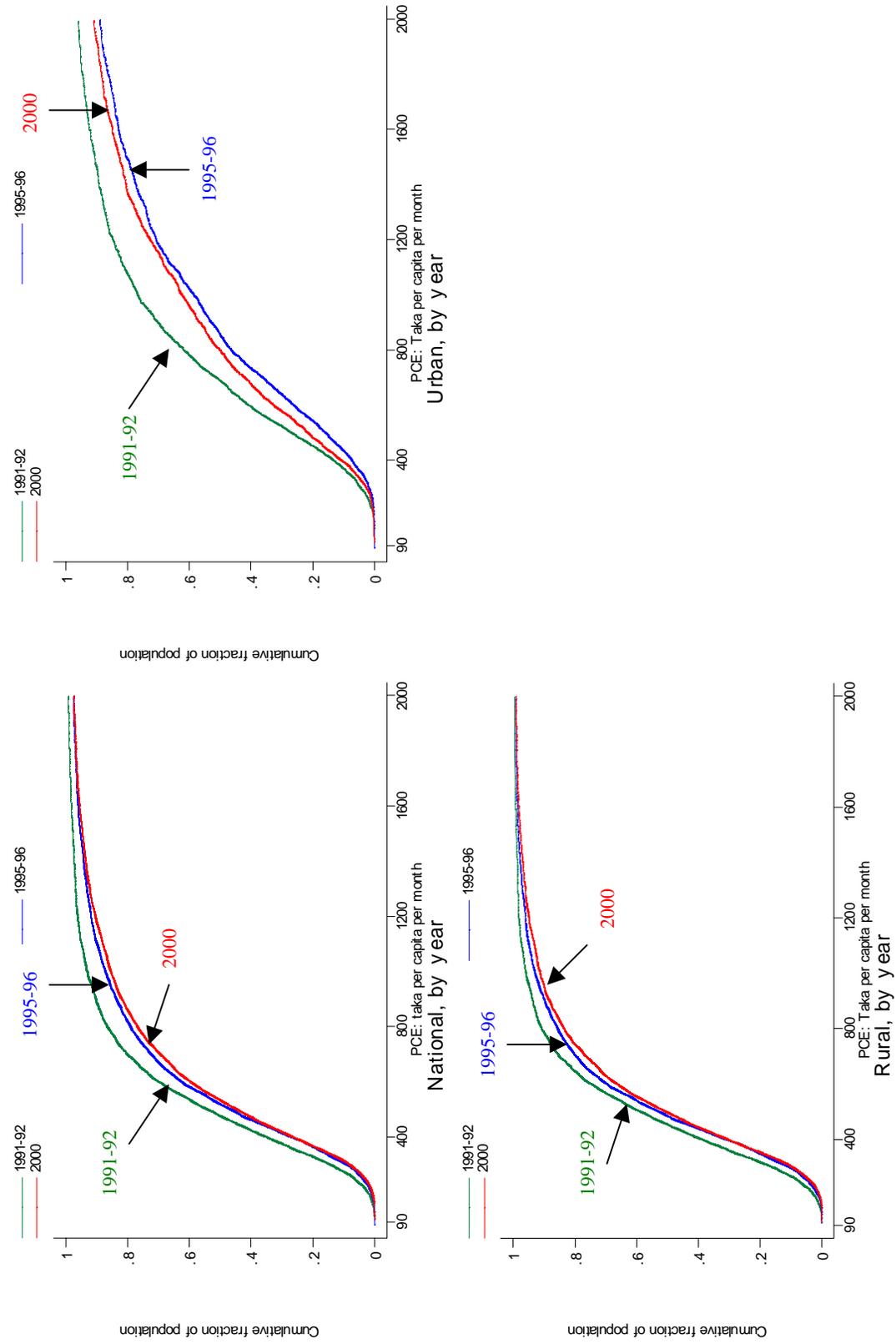
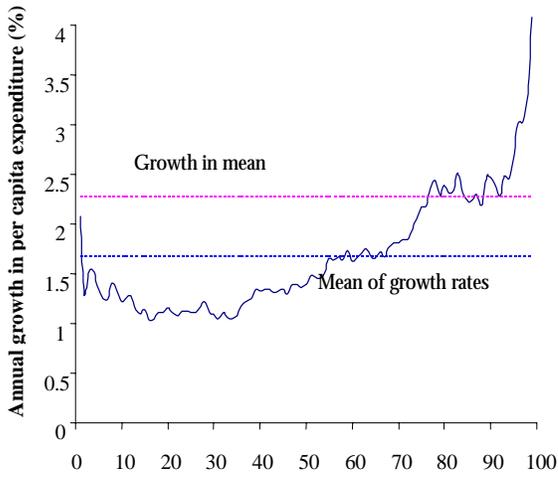
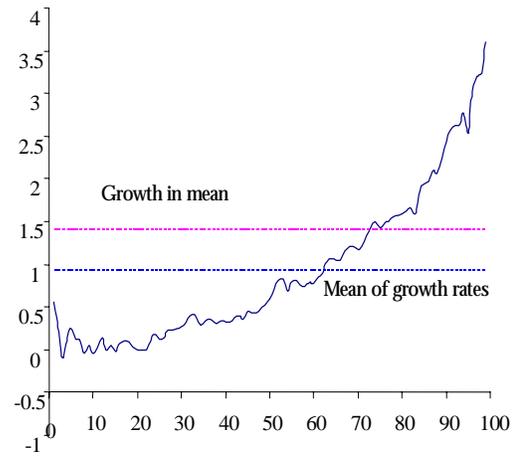


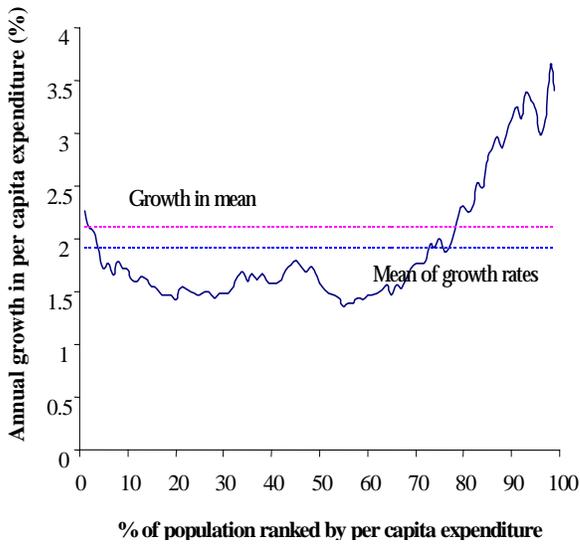
Figure A1.2. Growth Incidence Curves by Region, 1991-92 to 2000



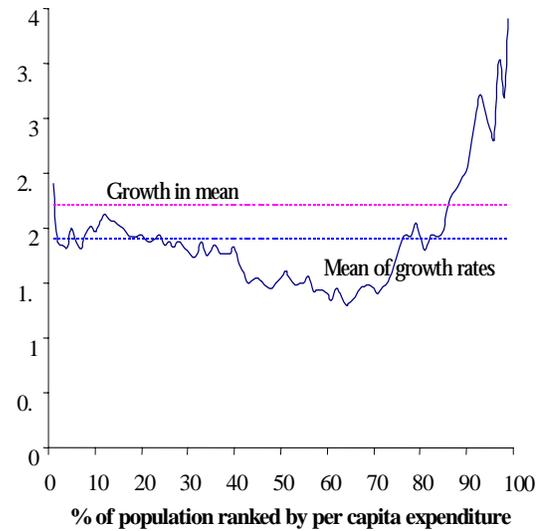
Dhaka



Chittagong



Khulna



Rajshahi

Figure A1.3: Average Quantities Consumed (grams per capita per month)

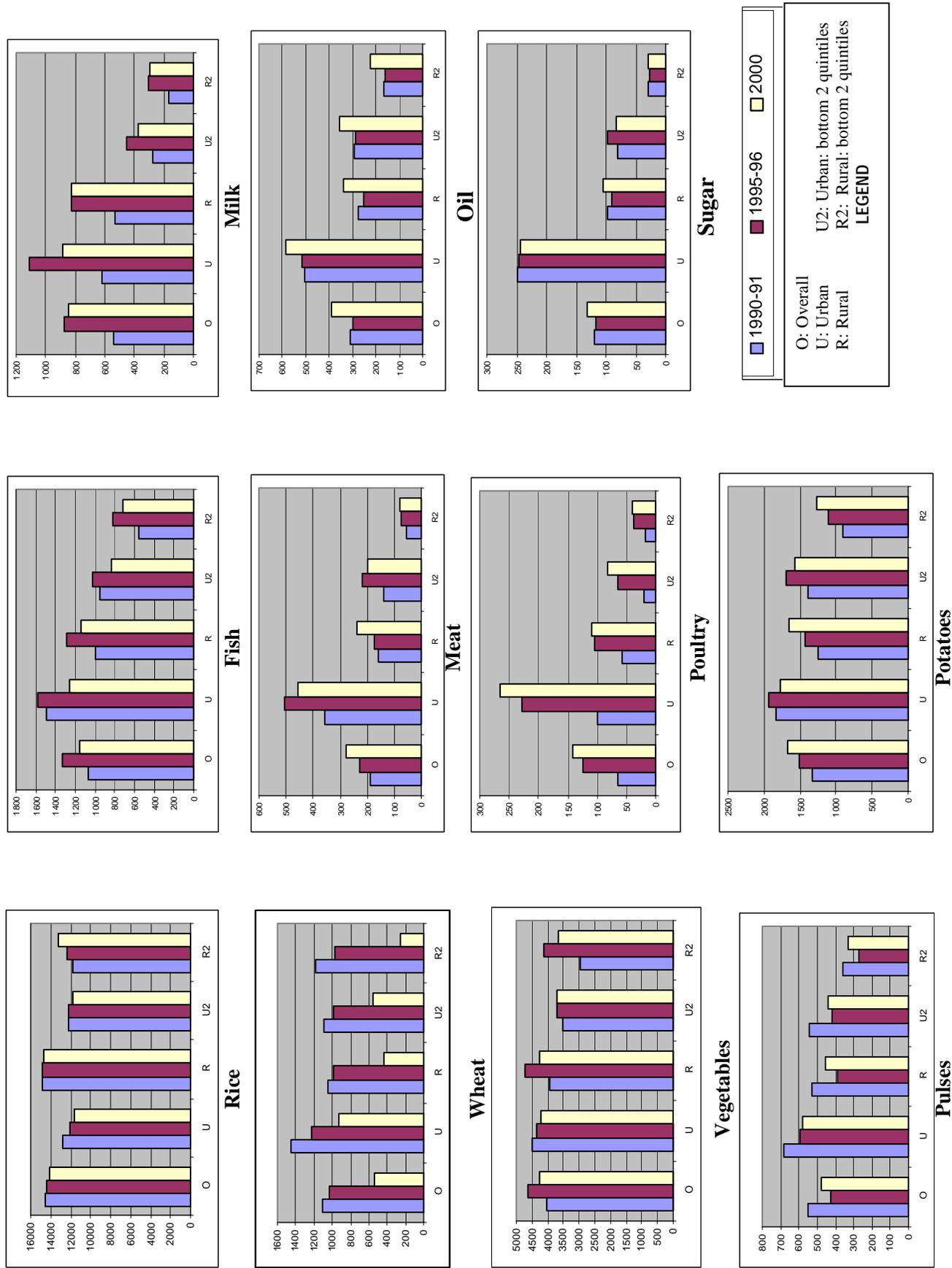


Table A2.1. Headcount Index Elasticities with respect to Growth and Inequality

	National	Rural	Urban
Upper Poverty Line			
Gross elasticity of poverty to growth	-2.12	-1.59	-2.34
Elasticity of poverty to inequality	0.85	0.60	0.81
Elasticity of inequality to growth	0.28	0.49	0.17
Net elasticity of poverty to growth	-1.88	-1.29	-2.20
Lower Poverty Line			
Gross elasticity of poverty to growth	-3.01	-2.29	-3.28
Elasticity of poverty to inequality	1.59	1.07	1.65
Elasticity of inequality to growth	0.28	0.49	0.17
Net elasticity of poverty to growth	-2.56	-1.76	-3.01

Source: World Bank staff estimates using the 1991-92 HES and 2000 HIES.

Notes: The net elasticity of poverty is the gross elasticity of poverty with respect to growth plus the product of the elasticity of inequality with respect to growth and the elasticity of poverty with respect to inequality (all growth rates are based on changes in *survey-based* mean per capita expenditures). The gross impact of growth alone on poverty is the impact of holding inequality (as measured by the Gini coefficient) constant.

Table A2.2. Employment Status among Women

	% employed women in each status		
	Overall	Rural	Urban
Self-employed	10.4	9.1	18.0
Employer	0.5	--	0.1
Employee	9.8	5.1	37.6
Day laborer	7.1	7.2	6.7
Unpaid family member	72.7	78.6	37.6
Total	100%	100%	100%

Source: 2000 LFS. *Notes:* Extended definition of the labor force. Employed women 10 years or older. -- indicates less than 0.1%.

Table A2.3. Structure of Employment in the Manufacturing Sector, by Gender

	% employed		
	Overall	Men	Women
Food and beverage industries	13.3	9.2	19.9
Mfg. Textiles	20.2	21.2	18.6
Clothing (excluding footwear)	19.3	9.8	34.3
Leather footwear	0.9	1.0	0.7
Tobacco industries	1.2	0.7	2.0
Chemicals & pharmaceuticals	2.2	3.2	0.7
Non-metallic mineral products	3.2	4.8	0.6
Wood products	8.3	12.7	1.3
Electrical machinery	1.4	2.1	0.3
Other	30.0	35.3	21.6
Total	100%	100%	100%

Source: 2000 LFS. *Notes:* Usual definition of the labor force. Employed persons in manufacturing, 10 years or older

Table A2.4. Determinants of Wages for Women and Men

Independent variable	Women	Men
Age	0.0193 (1.70)	0.053 (16.4)
Age squared	-.0002 (1.65)	-.0006 (14.2)
Grades completed	0.0776 (8.51)	0.045 (14.7)
Rural area	-0.116 (1.37)	-0.172 (5.98)
<u>Contract type:</u> (Daily wage=1)	0.326 (3.18)	0.034 (1.06)
<u>Public vs. Private sector:</u> (Public sector=1)	0.661 (5.84)	0.311 (7.89)
<u>Sector of Employment:</u> Textile/apparel	0.135 (0.79)	-----
Other manufacturing	-0.219 (1.74)	0.253 (7.32)
White Collar	0.256 (2.37)	0.248 (10.1)
Other (non-agriculture)	-0.326 (3.52)	0.343 (8.42)
No. observations	901	5,011
R ²	0.372	0.378

Source: World Bank staff estimates. *Notes:* Both regressions include a constant terms. Omitted category for sector of employment is agriculture. Absolute t-values in parentheses.

Table A2.5. Relationship between Per Capita Expenditures and Assets

Variables	Percent change in per capita expenditures	
	Urban	Rural
Characteristics of household head		
Age	ns	0.1
Age, squared	ns	ns
Female head, married	19.6	17.9
Female head, distressed	-0.3	-8.4
Education of Household Head		
Education, upto class 5	18.9	9.8
Class 6-9	29.8	17.2
Education, greater than class 9	56.7	30.9
Private Physical Assets		
Land: 0.05-0.49 acres	14.6	7.4
0.50-1.49 acres	23.5	16.5
1.50-2.49 acres	27.2	27.0
2.50 acres or more	26.0	44.2
Non-agricultural business assets (5,000 – 100,000 Tk)	3.3	17.4
Non-agricultural business assets (> 100,000 Tk)	3.6	37.9
Infrastructure and Access to Markets		
Electricity	---	5.7
Phone	---	12.4
Distance to bus stop (km)	---	-0.5
Distance to Dhaka (km)	---	ns
Access to Natural Assets		
Beel	---	3.3
Forest	---	ns
Khas	---	2.3
Grazing	---	ns
Diversification		
Main economic activity females: NAG	---	3.8
Main economic activity: NAG	---	ns
One crop land most predominant	---	5.2
Presence of Banks, NGOs, and Cooperatives		
Krishi Bank	---	-14.8
Grameen	---	ns
BRAC	---	-3.9
Proshika	---	-5.4
Farmers Co-operative	---	ns
B.S.S	---	3.9

Notes: The estimates measure the percentage increase in per capita expenditure associated with each variable, controlling for other included characteristics. ns means non significant at 10 percent. Both regressions include a constant and controls for household composition. The rural regression also includes dummies for Division that the household resides in. Since the community survey was not administered in urban areas, the urban regression does not include community characteristics. Village dummies were included in the urban regression to control for village fixed-effects.

Table A2.6. Land Ownership and Poverty: Rural Bangladesh

Per capita exp. Quintile	% population by amount of land owned (in acres)					Total
	< 0.05	0.05-0.49	0.50-1.49	1.50-2.49	2.5+ acre	
1	64.9	14.7	13.6	3.7	3.1	100%
2	55.0	13.5	17.5	8.3	5.7	100%
3	43.7	14.2	19.5	10.4	12.2	100%
4	35.2	12.0	20.3	12.3	20.2	100%
5	32.3	8.5	16.7	13.6	28.9	100%
Overall	48.0	13.0	17.5	9.2	12.4	100%

Source: World Bank staff estimates from 2000 HIES, rural sample

Table A2.7. International Comparisons of Unit Labor Costs in the Manufacturing Sector

Country	Unit Labor Cost (% in PPP of U.S.)	
	1980-1984	1990-1994
Bangladesh	11%	12%
India	21%	11%
Nepal	11%	Na
Pakistan	16%	Na
Sri-Lanka	11%	10%
China	11%	Na
Malaysia	40%	33%
Thailand	19%	14%
Indonesia	26%	15%
Philippines	24%	24%

Source: Estimations based on WDI 2001 and Penn World Tables. Details in Background Paper 8.

Figure A2.1. Poverty Trends in Bangladesh under Alternate GDP Growth Scenarios

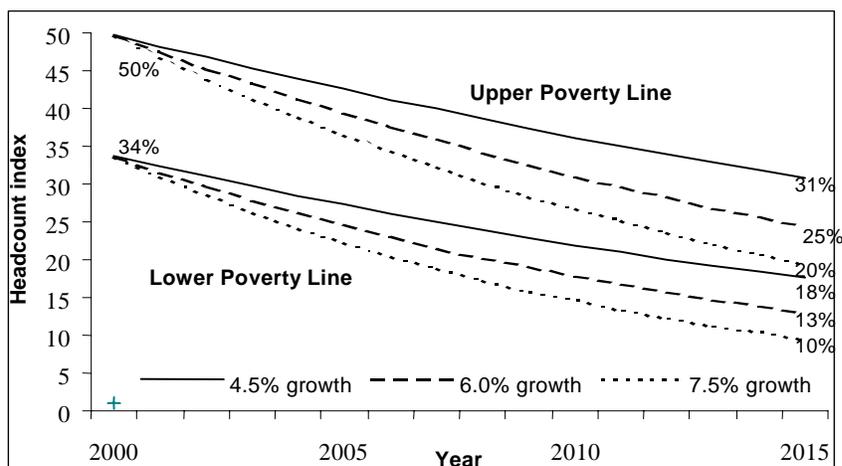


Table A3.1. Percentage of Children satisfying 'Basic Education' Criteria by Region

Region	% of children		
	1993	1998	Change
Rural Dhaka	29	24	-5
Rural Chittagong	21	18	-3
Rural Rajshahi	23	31	8
Rural Khulna	18	38	20
Rural Barishal	23	32	9
Rural Bangladesh	23	27	4
Urban Bangladesh	56	48	-6
Overall	27%	30%	3

Source: Reproduced from Table 5.19 in *Hope, Not Complacency*, 1999.

Table A3.2. Gross Enrollment Rates by Expenditure Quintile and Poverty Status

	Urban			Rural			Overall		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Primary:									
1 Lowest	74	86	80	72	79	75	73	80	76
2	91	98	94	85	87	86	86	88	87
3	107	101	94	95	99	97	97	99	98
4	108	102	95	95	103	99	97	103	100
5 Highest	102	83	92	105	108	107	105	103	104
Poor	81	89	85	82	87	85	82	88	85
Non-poor	105	97	101	99	102	100	0	101	101
Total	94	93	93	89	93	91	89	93	91
Junior Secondary									
1 Lowest	12	26	18	19	37	28	17	35	26
2	44	50	47	33	45	39	35	46	40
3	68	92	80	38	49	43	43	58	51
4	96	62	77	60	85	72	66	80	73
5 Highest	76	77	76	72	84	79	73	83	78
Poor	26	37	31	29	43	36	29	42	35
Non-poor	76	75	76	61	80	70	64	78	71
Total	53	61	57	43	59	51	45	60	53
Secondary									
1 Lowest	3	9	6	9	9	9	8	9	8
2	20	51	37	21	26	23	21	33	27
3	62	63	63	31	39	35	37	45	41
4	85	117	100	67	61	64	71	72	71
5 Highest	137	80	103	89	100	94	97	95	96
Poor	11	30	21	19	22	21	18	23	21
Non-poor	89	83	86	73	78	75	77	80	78
Total	62	65	63	47	49	48	50	51	52
High secondary									
1 Lowest	7	7	7	15	0	9	13	3	9
2	38	13	25	14	8	12	18	10	15
3	88	49	69	23	19	21	35	28	33
4	130	90	113	56	43	52	70	54	65
5 Highest	136	187	157	101	75	90	109	99	105
Poor	21	10	15	16	9	13	17	9	14
Non-poor	119	108	114	72	56	66	83	71	78
Total	90	75	83	48	38	45	57	48	54

Source: 2000 HIES, World Bank staff estimates

Table A3.3. Distribution of Public Education Expenditures (percent) in Various Countries

	Year	Source	Welfare class					Total
			1 (lowest)	2	3	4	5 (highest)	
Vietnam	1998	Vietnam PER, WB 2000						
Primary			26	25	23	16	10	100%
Secondary			13	19	23	24	21	100%
Upper secondary			4	11	17	30	38	100%
Higher and vocational			1	2	6	20	72	100%
Bolivia (urban only)	1989	Grosh						100%
Primary			40	28	18	10	4	100%
Secondary			30	29	22	13	6	100%
Tertiary			8	17	24	27	23	100%
Chile	1983	Petrei						100%
Primary			37	28	19	11	5	100%
Secondary			21	27	22	19	10	100%
Tertiary			6	7	14	20	54	100%
Costa Rica	1986	Sauma and Trejos						100%
Primary			30	27	21	14	8	100%
Secondary			18	21	23	21	17	100%
Tertiary			10	5	14	29	43	100%
Cote d'Ivoire	1995	Demery et. Al						100%
Primary			19	21	24	22	14	100%
Tertiary			6	20	15	13	46	100%
All education			14	17	17	17	35	100%
Albania	1996	Albania PER, WB 2001						100%
Basic			22	22	20	20	16	100%
Upper secondary			6	10	21	25	38	100%
Tertiary			5	5	29	21	40	100%

Table A3.4. Distribution of Government Health Subsidies by Sector

	Urban					Rural						
	1 lowest	2	3	4	5 highest	Total	1 lowest	2	3	4	5 highest	Total
F. plan. & communicable diseases	17	19	19	22	23	100%	20	20	20	21	20	100%
Child health	23	22	20	23	12	100%	25	22	21	18	14	100%
Maternal Health	13	17	24	23	24	100%	23	17	21	18	22	100%
Curative care	10	32	16	24	18	100%	14	18	26	22	21	100%
All Health Subsidies	14	26	18	23	19	100%	19	19	23	20	20	100%

Source: 2000 HIES, World Bank staff estimates

Table A3.5. Distribution of health subsidies across welfare classes in selected countries

	Year	Source	Welfare class					Total
			1 (lowest)	2	3	4	5 (highest)	
Vietnam (inpatient)	1993	Prescott 1997	13	17	24	22	24	100
Vietnam (outpatient)	1993	-	9	14	15	23	39	100
Vietnam (community centers)	1993	-	20	29	22	18	10	100
Vietnam (all)	1993	-	12	16	21	22	29	100
Malaysia(inpatient)	1984	Govt. of Malaysia	25	21	19	20	16	100
Malaysia (out patient)	1984	-	24	23	21	18	15	100
Ghana (all health)	1992	Demery et. al.	11.6	15.5	18.7	21.4	32.9	100
India (curative)	1995	NCAER 2000	10.1	13.4	17.8	25.6	33.1	100

* For India, consumption of immunizations and outpatient care in PHC and below (non-hospital care) appears to be pro-poor. Outpatient and inpatient hospital care appears to be pro-rich. The exact parameters of the distributions are not available at the moment.

Table A3.6: Child malnutrition rates in South Asia, 1990-2000

Nutrition status indicator	Bangladesh	India	Pakistan	Sri Lanka
	1999-2000	1998-99	1990-91	1987
<u>Stunting (height-for-age)</u>				
Moderate or severe	50	57	57	34
Severe	20	32	36	-
<u>Underweight (weight-for-age)</u>				
Moderate or severe	56	58	46	48
Severe	17	24	19	-
<u>Wasting (weight-for-height)</u>				
Moderate or severe	9	13	10	13
Severe	1	2	1	-

Source: Various DHS Reports. Note: For comparability, comparison is limited to children 24-35 months (24-36 in the case of Sri Lanka).

Table A3.7: Rates of child malnutrition among children aged 0-59 months, 1995-2000

Nutrition Status Indicator	Bangladesh DHS	
	1996-97	1999-00
<u>Underweight (weight-for-age)</u>		
Moderate or severe	56	48
Severe	21	13
<u>Stunting (height-for-age)</u>		
Moderate or severe	55	45
Severe	28	18
<u>Wasting (weight-for-height)</u>		
Moderate or severe	18	10
Severe	4	1

Source: Various DHS reports.

Table A3.8: Rates of child malnutrition among children aged 6-23 months, by drinking water source, type of toilet, and housing conditions

	Water, sanitation and Housing Indicator	Moderate or severe		Severe	
		Underweight	Stunting	Underweight	Stunting
Drinking water source	Tap	38.2	32.2	7.7	11.7
	Well or tube well	51.6	49.3	12.7	19.3
	Pond or river	68.6	67.2	20.7	23.2
Type of toilet	Flush or sanitary toilet	28.2	27.8	4.4	6.4
	Pit latrine	47.4	42.4	9.8	18.1
	Open space or temporary toilet	56.7	55.5	15.4	21.4
Type of roof material:	Cement	28.1	28.6	6.2	7.1
	Corrugated iron sheet, wood, tile, other	58.3	56.8	15.7	23.1
	Hemp, hay or bamboo	50.5	47.8	12.1	18.6
Type of wall material:	Brick or cement	31.6	29.3	6.2	7.6
	Corrugated iron sheet, wood, mud brick	49.7	46.1	11.2	16.4
	Hemp, hay, bamboo and other	58.2	57.2	15.8	24.9
Housing space (sq. ft.) per person:	Up to 30	57.4	55.1	15.5	24.6
	31 to 60	51.4	50.6	12.4	19.2
	More than 60	45.4	41.1	10.6	14.1

Source: 2000 CNS.

Table A3.9: Rates of child malnutrition among children aged 6-71 months, by access to facilities, 2000

	Sample and indicator	Moderate or severe		Severe		
		Underweight	Stunting	Underweight	Stunting	
Entire sample	Thana health	5 km or closer	51.9	47.7	12.1	17.8
		More than 5 km away	53.5	52.0	13.9	20.7
Bottom cons. quintile	Center	5 km or closer	57.9	56.0	16.0	24.0
		More than 5 km away	63.1	62.2	18.4	26.5
Entire sample	Private health	5 km or closer	55.7	53.2	12.0	19.7
		More than 5 km away	52.6	50.6	13.7	19.7
Bottom cons. quintile	Clinic	5 km or closer	60.4	52.2	11.2	18.5
		More than 5 km away	61.6	62.1	17.2	26.4
Entire sample	NGO clinic	Not in the village	52.4	51.0	13.3	19.4
		Located in the village	57.4	53.2	13.5	22.2
Bottom cons. quintile		Not in the village	61.9	60.8	17.2	26.5
		Located in the village	55.5	52.2	16.2	22.9

Source: 2000 CNS.

Table A4.1. Annual Off-take of Food Grains from PFDS: Non-Monetized Channels

OVERALL	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01
FFW	462,895	540,585	368,619	425,307	500,223	469,219	458,316	469,070	697,599	754,818	611,000
FFE				79,553	174,486	241,170	277,385	357,738	286,662	285,973	350,000
VGD	224,616	230,733	131,862	166,924	183,901	173,210	179,775	198,150	205,826	216,675	184,000
VGF	85,495							30,585	464,286	149,138	153,000
TR	65,668	97,936	32,972	71,489	96,734	89,338	134,067	101,449	90,310	124,508	90,000
GR	44,397	55,985	17,844	29,594	30,146	74,619	17,850	17,659	74,234	20,324	28,000
Other			65,951	72,433	79,828	99,574	60,423	49,190	54,955	57,690	61,954
Total	883	925	617	845	1,065	1,147	1,128	1,224	1,874	1,609	1,478

(Total in '000 metric tons; all other figures in metric tons)

RICE:	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01
FFW	42,722	28,581	205,084	972	7,336	739	126,576	3,312	7,637	334,516	193,000
FFE				216	6,024	3,897	209,625	71,039	59,636	112,058	150,000
VGD	85,495	26,477	55,585	137	1,679	713	87,584	75,975	11,495	62,032	64,000
VGF	85,495							24,167	168,318	126,475	132,000
TR	33,718	3,751	30,339	546	5,085	1,357	121,423	14,683	37,017	62,374	40,000
GR	31,689	31,974	10,912	12,552	3,807	33,955	16,598	8,532	65,844	7,562	24,000
Other			62,598	57,117	42,279	28,887	55,471	43,618	36,067	38,851	35,000
Total	279	91	365	72	66	70	617	241	386	744	638

(Total in '000 metric tons; all other figures in metric tons)

WHEAT:	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00	FY01
FFW	420,173	512,004	163,535	424,335	492,887	468,480	331,740	465,758	689,962	420,302	418,000
FFE				79,337	168,462	237,273	67,760	286,699	227,026	173,915	200,000
VGD	139,121	204,256	76,277	166,787	182,222	172,497	92,191	122,175	194,331	154,643	120,000
VGF								6,418	295,968	22,663	21,000
TR	31,950	94,185	2,633	70,943	91,649	87,981	12,644	86,766	53,293	62,134	50,000
GR	12,708	24,011	6,932	17,042	26,339	40,664	1,252	9,127	8,390	12,762	4,000
Other			3,353	15,316	37,549	70,687	4,952	5,572	18,888	18,839	26,954
Total	604	834	253	774	999	1,078	511	983	1,488	865	840

(Total in '000 metric tons; all other figures in metric tons)

Source: MIS, DG Food and FPMU, Ministry of Food. FY01: Sept. Food Grain Digest, Table 1f.

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