BIDS

Annual
Research Programme

2011-2012

Bangladesh Institute of Development Studies

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Introduction

The Bangladesh Institute of Development Studies (BIDS) is an autonomous public multi-disciplinary organisation which conducts policy oriented research on development issues facing Bangladesh and other developing countries. Its mission is to facilitate learning in development solutions by conducting credible research, fostering policy dialogue, disseminating policy options, and developing coalitions to promote informed policy making.

In its pursuit to moving forward its mission of building research capacity and conducting in-depth and policy relevant research, BIDS undertakes a wide spectrum of activities covering its mandate of enriching the country's policy environment, creating awareness on improving the policy responses, enhancing policy analysis and dissemination capacities, and influencing policies.

The BIDS Annual Research Program (ARP) 2011-2012 provides the summary information on the research studies that the Institute plans to undertake during the financial year 2011-2012. The proposed research agenda covers priority issues in different aspects of the Bangladesh economy which have been grouped under various thematic areas, such as *Agriculture, Food Security and*

Rural Development; *Water Resources Development*; *Poverty and Vulnerability*; *Gender Analysis*; *Growth Issues and Regional Development; Health*; *Investment, Manufacturing Industry and Labor Standards*; *Macroeconomic and Trade Policy Analysis*; *Energy Issues*; *Climate Change Impacts*; *Population Studies and Social Protection.*

In addition to studies sponsored by government ministries and agencies as well as other national and international organisations, the research agenda includes studies to be undertaken under the BIDS Research Endowment Fund (REF) which reflects the institutional policy oriented research of the Institute identified through interactions with policy makers and civil society and other partners. The ARP 2011-2012 has already been approved by the BIDS Board of Trustees. However, the proposed research portfolio may include other studies which BIDS may consider appropriate to address important developments of the Bangladesh economy during the year.

BIDS will further strengthen its present efforts of concretizing its long term vision for being part of a process to play a more pro-active role in shaping the future agenda in the coming days not just for the

government but for everyone concerned with the theory and practice of development in general and of Bangladesh in particular. The BIDS research agenda will continue to serve the cause of sustainable and inclusive development in Bangladesh and elsewhere in the developing world.

Studies under BIDS Research Endowment Fund (REF)

Broad Theme: *Agriculture, Food Security and Rural Development*

Name of Study: Surplus Utilisation and the Pattern of Investment by Farm Households in Bangladesh.

Research Team: Bimal Kumar Saha, Senior Research Fellow.

Budget: Tk. 1 million

Time Frame: October 2011-June 2012

Rationale and Objectives

By now, considerable analyses pertaining to production, productivity, growth and income distribution in the context of Bangladesh agriculture have been done. But studies on surplus utilisation, investment and capital formation are very few and inadequate for effective policy formulations. For instance, Schultz (1964) provides a hypothesis in theoretical perspective that investment is a positive function of opportunities. But inter-farm analysis done by Rahman (1980) does not appear to vindicate the Schultzian hypothesis in sofar as productive investment both as a per centage of total investment per acre of cultivated land declines with the increase of farm size.

It is widely acknowledged that the investment on irrigation, which is a major productive investment and the main vehicle for technological progress, is mostly undertaken by the government. For this reason, the farmers, particularly the large ones, may not have the required incentives to make this type of productive investment. Furthermore, exploitative factor markets such as land, liberalisation and credit and their interlinkages may constrain productive investment and capital formation, irrespective of whether new opportunities are created in the economy or not. This indicates that explanations of low and inverse hypothesis of surplus reinvestment are to be sought–both from technical and structural points of view.

Furthermore, it is often argued that agriculture at the existing structure and level of technology adoption can hardly generate surplus for

productive investment. For that matter, new technologies are being adopted. Under this objective condition, an investigation in more detail and depth is urgently needed to analyse the dynamic effects of technology adoption on surplus generation, rate of reinvestment and capital formation.

Keeping in view the above considerations, the study aims at the following objectives:

i) Estimate the level of surplus generated by farm households of different size and tenure categories in order to assess the magnitude of potential investible capital at their disposal at different technological levels (e.g. traditional, less progressive and progressive levels of technology adoption);

ii) Examine the pattern of investment and surplus utilisation of selected farm households of different size and tenure categories in relation to technology adoption;

iii) Assess how the surplus is generated and distributed among the classes and/or groups of farms so as to determine their progressive/regressive roles and the inherent conflicts among them for understanding of the dynamics of the society.

Methodology

The study will largely be based on secondary data drawn from various micro/area/regional surveys conducted by BIDS and other research organisations. An illustrative survey of about 100 sample households may be undertaken in 2 or 3 villages in certain parts of Bangladesh. This survey may be helpful to provide insights and to perceive relevance of some specific indicators pertaining to surplus generation, utilisation and capital formation in Bangladesh agriculture. Furthermore, government and non-government documents/ publications would be consulted to provide a picture that can be Generalised at the macro level, by integrating results from various micro studies.

Policy Implications

This theme of work is least researched, but appears to be most urgent for providing effective policy formulations in order to stimulate continuous growth of productive forces in Bangladesh agriculture.

Broad Theme: *Poverty and Vulnerability*

Name of Study: Livelihood Vulnerability Index for the Coastal Districts of Bangladesh

Research Team: Kazi Ali Toufique, Senior Research Fellow and Mohammad Yunus, Senior Research Fellow

Background and Rationale

Bangladesh is one of the most climate vulnerable countries in the world. It experiences frequent natural disasters which cause loss of life, damage to infrastructure and economic assets, and adversely impacts on lives and livelihoods, especially of poor and marginal households. Climate change will continue to exacerbate many of the current problems and natural hazards the country faces. It is expected to result in:

- increasingly frequent and severe tropical cyclones, with higher wind speeds and storm surges leading to more damage in the coastal region;

- heavier and more erratic rainfall in the Ganges-Brahmaputra-Meghna system, including Bangladesh, during the monsoon resulting in (i) higher river flows, causing over-topping and breaching of embankments and widespread flooding in rural and urban areas, (ii) river bank erosion resulting in loss of homes and agricultural land to the rivers; and (iii) increased sedimentation in riverbeds leading to drainage congestion and water-logging;

- melting of the Himalayan glaciers, leading to higher river flows in the warmer months of the year, followed by lower river flows and increased saline intrusion after the glaciers have shrunk or disappeared;

- lower and more erratic rainfall, resulting in increasing droughts, especially in drier northern and western regions of the country;

- sea level rise leading to submergence of low-lying coastal areas and saline water intrusion up coastal rivers and into groundwater aquifers, reducing freshwater availability; damage to the Sundarbans mangrove forest, a World Heritage site with rich biodiversity; and drainage congestion inside coastal polders, which will adversely affect agriculture ; and

- warmer and more humid weather leading to increased prevalence of disease and disease vectors.

These are wider impacts of climate change on resource systems and

environment. The crucial issue here is how do they affect livelihoods? To address this and related concerns vulnerability assessment is required to understand the complex set of factors that contribute to adaptive capacity of the households. Vulnerability assessment describes a diverse set of methods used to systematically integrate and examine interactions between humans and their physical and social surroundings. Hahn *et al.* (2009)[1] has developed Livelihoods Vulnerability Index (LVI) as a tool for vulnerability assessment. This study will use and extend this index to measure the vulnerability of the households living in the coastal region of Bangladesh.

Research Questions

The field of climate vulnerability assessment has emerged to address the need to quantify how communities will adapt to changing environmental conditions. Many of these rely heavily on the IPCC working definition of vulnerability as a function of exposure, sensitivity, and adaptive capacity.

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[1] Hahn, M, A. Riederer and O. Foster, 'The Livelihood Vulnerability Index: A Pragmatic Approach to Assessing Risks from Climate Variability and Change - A Case Study in Mozambique', *Global Environmental Change* 19 (2009) 74–88.

The LVI uses multiple indicators to assess exposure to natural disasters and climate variability, social and economic characteristics of households that affect their adaptive capacity, and current health, food, and water resource characteristics that determine their sensitivity to climate change impacts. These multiple indicators can also be used to estimate vulnerability as defined by IPCC 2001. This approach differs from previous methods in that it uses primary data from household surveys to construct the index.

While this approach is good for understanding regional variation in vulnerability, it does not extend the analysis to other dimensions that are crucial for policy making. For example, are rural households more vulnerable to climate change as compared to the urban households? Are households living close to the coast more vulnerable than those living away from the coast? Are households more vulnerable to floods than to cyclones? The database at our disposal can help to address these and other similar questions.

Policy Relevance

LVI presents a framework for grouping and aggregating indicators on the regional levels, which can be critical for development and

adaptation planning. The regional dimensions can be stretched from village to national levels and corresponding vulnerability indices can be estimated and used for public interventions in areas like disaster prevention, funds allocation and so on.

Another advantage is the reduction in dependence on climate models, which despite recent advances are still presented at too large a scale to provide accurate projections at levels useful for community development planning.

Data and Methodology

For the purpose of vulnerability assessment of households, 12 coastal districts were selected. In the second stage, as many as 18 upazilas were selected from these districts. These upazilas were selected on the basis of their proximity to the coast of the Bay of Bengal. In the third stage, as many as 36 union parishads or paurashavas were selected. As such, the selection process in the first third stages was purposive. Finally, as many as 532 households were selected with average of 15 households from each union parishad/paurashava. The household questionnaire was designed in a manner to extract information about socioeconomic characteristics of a

household, level of exposure to risks and the experience they had about the catastrophic impact of the last disaster on their lives and livelihood and how they cope with the disaster. Assessment of risk exposure will be analysed from three perspectives: (i) characterisation of the incidence of poverty (food security) of the households, (ii) characterization of household level risks, and (iii) coping mechanism of households.

Based on available information in the dataset, we intend to use several indicators to assess vulnerability. The following components will be used: socio-demographic profile, livelihood strategies, social networks, health, food, water, and natural disasters and climate variability. Each component will have several sub-components.

Broad Theme: *Gender Analysis*

Name of Study: Market Analysis of Demand for Women Workers in the Export-Oriented Garment Sector of Bangladesh

Research Team: Pratima Paul-Majumder, Senior Research Fellow

Budget: Tk. 1.0 million

Time Frame: October 2011-June 2012

Rationale and Objectives

The demand for liberalisation in an export-oriented industry depends on both global and local factors. Global factors, particularly global demand and market access conditions imposed by importing countries are the most influential one affecting the demand for liberalisation in the export-oriented garment industry of Bangladesh. Among the local factors, availability of abundant liberalisation is the most influential one. Women's liberalisation is more abundant compared to men's. In addition to the abundant labor supply, women's liberalisation contributes to the competitiveness of the industry since the opportunity cost of women's liberalisation in an economy like Bangladesh's is either zero or very low.

However, during the past few years, both global and local factors changed considerably and thus the situation with regard to liberalisation demand in the garment sector has also changed substantially. Now, Bangladesh has to compete with other countries to have access to the global market. But in terms of technological development and liberalisation productivity the Bangladesh garment industry it is far behind its competitors. Also, due to the development of other women friendly sectors, the opportunity cost of women's liberalisation cannot be considered to be zero any more. For all these reasons, in the near future, Bangladesh may not remain as the cheapest liberalisation cost country. Hence, the international buyers may attempt to look for other cheaper liberalisation cost countries that may affect the growth of the garment industry in Bangladesh and thus the demand for women's liberalisation.

The present study will be undertaken with an objective of making a market analysis of women's liberalisation demand in the garment sector of Bangladesh.

Methodology

Data and information required to make this analysis will be collected from BEPZA, BKMEA, BGMEA, EPB, MoLE and garment employers. Data regarding growth pattern of garment industry in Bangladesh will be collected from these organisations. The demand for women's liberalisation varies according to the type of garment products (knit and woven wear), technology involved in production, socio-demographic characteristics of the women workers (female workers' age, their marital status, working experience, liberalisation- wage, job status, nature of factories, etc.) and,

above all, on the choice of the garment manufacturers. Therefore, data regarding all these factors will also be collected from the garment manufacturers through both focus group discussions (FGDs) and interviews. In addition, data will be collected through FGDs conducted among workers employed both in the knit and woven wear factories in export processing zones (EPZs).

Policy Implications

It is expected that findings of this research would make both the Bangladesh government and garment employers and also the society to provide all facilities to girls and women so that they can make a competitive liberalisation market for the export industries of Bangladesh.

Name of Study: Bangladesh National Policy on Women's Development 2011 and the National Budget of Bangladesh

Research Team: Researchers from Human Resources Division, BIDS

Budget: Tk. 0.7 million

Time Frame: October 2011-June 2012

Rationale and Objectives

Recently, the Government of Bangladesh has adopted the National Policy on Women's Development 2011, which ushered in a new era of hope and enthusiasm for achieving gender parity and empowerment of women. The Policy will not only elevate the condition of the women of Bangladesh, but will also enhance the position of our country in the would community because its goals are aligned with the internationally acclaimed Millennium Development Goals (MDGs). The challenge now is to implement the Policy – the Policy will remain a paper document unless it is put in practice and the goals will remain unfulfilled unless practical benefits are realised by women and the society from the Policy. Therefore, it is necessary to thoroughly evaluate the Policy in relation to the National Budget of Bangladesh.

In order to meet this challenge of ensuring women's development, appropriate implementing measures must be undertaken. The National Budget is the most powerful tool in the hand of the Government in this context. Hence, evaluation of the national budget will reveal whether this tool (National Budget for the FY 2011-2012) has been used effectively to implement the National Policy on Women's Development, 2011.

The study will evaluate the national budget FY2011-12 from the perspective of the Women's Development Policy 2011. Evaluation of the following articles of the National Policy on Women's Development, 2011 will be done to identify the role of the national budget in implementing the policy:

Article 16.22: *Providing overall assistance for ensuring the promotion of women entrepreneurs;*

Article 21.1: *Promoting education among women to remove gender disparity in education and to involve women in the mainstream of development efforts.*

Article 23.5: *Equal opportunity and participation of women in employment and resources;*

Article 23.7: *Equal wages for men and women workers, increased participation of women workers in the liberalisation force ensuring equal opportunity and security for women in the workplace, removal of disparity in the liberalisation force;*

Article 31.4: *Taking steps to ensure equal opportunity for women agricultural workers in respect of raw materials, seeds, fertilisers, farmer's cards and loans.*

Methodology

Data will be gathered through review of secondary literature, (particularly budget speech of Finance Minister, ADPs, fiscal policy), and in-depth interviewing of stakeholders. Qualitative research methods will be used to analyse the data in order to evaluate the Policy.

Policy Implications

It is expected that findings of this research would lead to concern agencies to provide adequate budgetary allocation and undertake measures to implement effectively the National Policy on Women's Development, 2011.

Broad Theme: *Health*

Name of Study: Professional Assistance during Birth, Public-Private Mix and Household Characteristics: Implications for Policy

Research Team: M. Sohail, Research Fellow

Budget: Tk. 1.0 million

Time Frame: October 2011-June 2012

Rationale and Objectives

Bangladesh experienced a significant decline in maternal mortality during the last two decades. Maternal mortality declined from 570 in 1990 to 322 in 2001 and again to 194 in

2010- a 40% decline since 2001. Bangladesh is, therefore, well on track to achieving the target of MDG5 by 2015. A widely acclaimed indicator used to monitor the progress in maternal health is to increase skilled assistance during delivery from 5% in 1990 to 50% in 2015. Skilled attendants refer "exclusively to people with midwifery skills (for example, doctors, midwives, nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage or refer complications."

Achieving MDG5 of reduction maternal mortality ratio by 75% by 2015 is heavily dependent upon access to skilled attendants for ANC, delivery care, facility delivery with EmOC services to manage life-saving maternal complications. Skilled birth attendant strategy was thus incorporated into the facility based approach of obstetric care in 2001 and already 3,000 community based skilled attendants have been trained and another 1000 being trained annually. Fifty-nine District Hospitals, 132 Upazila Health Complexes and 70 Maternal and Child Welfare Centres have been upgraded as comprehensive EmOC facilities and another 200 facilities at the upazila and union level have been equipped with basic EmOC services.

Recently the government has introduced maternal voucher scheme for poor mothers in 53 upazilas in 41 districts of Bangladesh. Under this scheme poor mothers are identified by local committees on the basis of certain set criteria and provided with vouchers to buy maternal health care services from different selected providers or facilities in the area.

Bangladesh is passing through a transition from deliveries conducted at home by traditional birth attendants to deliveries conducted by professional attendants. The challenge is how to ensure a transition to more and more deliveries to be conducted in both basic and, if needed, in comprehensive essential obstetric care facilities by professionally trained personnel.

Large disparities in the maternal health care utilisation exist between the poorest and the richest population in Bangladesh. Two in three women in the highest wealth quintile receive antenatal care from qualified doctors as opposed to one in five women in the lowest wealth group. Almost all the deliveries occur at home among the lowest wealth quintile, whereas 16 per cent of deliveries occur at health facilities among the highest wealth quintile.

Wealth is also associated with the seeking of delivery care by caesarean section and delivery-related complications.

A major constraint to the use of maternal health care is the cost of delivery, especially for a complicated delivery. The costs involved in birth even in the public sector are high including charges for diagnostic tests, medications, unofficial fees, travel and food. Besides, the cost of complicated deliveries is often catastrophic. The government has therefore introduced maternal voucher scheme to assist poor mothers in selected areas, but it has reportedly been misused by performing higher than normal proportion of caesarian sections.

The proportion of births delivered at a health facility increased from 4 per cent in 1989-93 to 15 per cent in 2002-06. The recent increase in institutional deliveries is mainly due to increase in deliveries at NGO and private facilities. Over two-thirds of the deliveries in private facilities during 2005-07 were caesarian, which indicates that obstetric surgery might have been used for exploitative purposes. However, poor women and women residing in rural areas often do not have access to life-saving surgery.

The study will examine the trend of utilisation of maternal health care services (antenatal care, delivery care and facility delivery) by source of use (public, private, NGO) and by socio-economic factors. The study will also assess structural aspects of facility quality, gaps in service quality and socio-cultural barriers.

The specific objectives of the study are:

i.   To examine the trend of utilisation of maternal health care services during birth (antenatal care, delivery care, facility delivery) by professional attendance by source of use (public, private, NGO) and by various socio-economic factors;

ii. To analyse the utilisation of antenatal care, delivery care and facility delivery by skilled attendance by source of use and by socio-economic characteristics;

iii. To assess the structural aspects of facility quality, gaps in service quality, sources of finance and socio-cultural barriers in accessing care.

Methodology

The study will use data from the BDHS of various years to look at the trend of service utilisation by skilled birth attendants. The study will also

collect information from a representative sample of 720 women from six divisions of the country. Multivariate analysis will be undertaken to understand the differentials in utilisation of skilled attendance for ANC, delivery care and facility delivery by age, family size, public-private mix, education, region, wealth strata and other relevant socio-economic variables. This information will be supplemented by the existing supply side facility and individual level qualitative information from relevant managers of health centres, influential people in the locality and women in the reproductive age group.

Policy Implications

The study will explore the barriers faced by the households in seeking maternal health care from both demand and supply aspects of care and identify the critical aspects such as female empowerment, availability of transport, travel time, quality of care and referral in influencing professional assistance during care. It will also examine public-private mix in ensuring quality care and the relative effectiveness of both public and private sectors in meeting the expectations of the recently introduced maternal voucher scheme in improving maternal health care.

The study will therefore identify critical barriers to maternal health care and assist in formulating policies for achieving MDG5 by 2015.

Name of Study: Burden of Disease on the Urban Poor: A Study of Morbidity and Utilisation of Health Care among Slum/Pavement Dwellers in Dhaka City

Research Team: M.A. Mannan, Senior Research Fellow

Budget: Tk. 1.0 million

Time Frame: October 2011-June 2012

Rationale and Objectives

Poor people and residents of slum area are likely to be especially vulnerable to illness because of the generally unhygienic conditions in which they live, and their low levels of awareness of preventive care. Improving the health of individuals, particularly those belonging to socially and economically disadvantaged groups, is a key objective of the Bangladesh government. With the increase of urban population, environmental concerns such as adequate housing and sanitation, clean air to breathe and potable water, are increasingly being expressed. In Dhaka and Chittagong cities, more than one-third of the population lives in slums, often without access to basic

services (health, nutrition and education). In reality, a slum is a swamp of mud, excrement, garbage, mosquitoes and disease. Conditions such as these not only lead to ill-health, they amount in themselves to the lack of social well-being referred to in WHO's definition of health. Although slum people in general suffer from ill-health, the conditions of pavement dwellers are much worse than those living in slums/squatters. The proposed study will be undertaken to examine the patterns of morbidity and health care utilisation by the urban poor.

In recent years, urban population is growing at an increasing rate in Bangladesh. Until 1960, only 5% of the population of Bangladesh was living in urban areas. However, during the last 5 decades, the pace of urbanisation has been very high. Urban population has grown from 5 million in 1970 to 22 million in 1990 to about 52 million in 2010. The magnitude of urban population (around 50 million) is larger than the national population of many countries in the world (Australia, Canada). In Bangladesh, the urban population is increasing at an annual rate of between five and six per cent. Accompanying this rapid pace of urbanisation, there has been a faster growth in the population living in slums and squatters.

In Dhaka city, out of an estimated population of 12 million, about are third of the population is slum dwellers. They are in a vicious circle: too little or inadequate food, poor nutrition, polluted water and air, lack of education, poor sanitation and overall low levels of living. The proposed study is expected to shed light on the health status and health seeking behaviour of slum/pavement dwellers, where overcrowding and poor basic amenities coupled inadequate water availability and poor sanitation result in higher sickness and mortality.

The main purpose of the proposed study is to examine the pattern of morbidity and health care utilisation by the urban poor living in the slums and pavements of Dhaka and Chittagong city. The study will analyse illness factors associated in the types of health care (self-care or medical care) used to resolve health problems of the urban poor living in slums and pavements of Dhaka city. The study will also explore morbidity pattern and health-seeking behaviour of the urban poor, with the hypothesis that the pavement dwellers are likely to suffer from higher morbidity, and they are also more likely to depend on self-care and traditional treatment compared to their counterparts living in urban slums.

The specific objectives are:

- To assess the levels and patterns of morbidity by age, gender and socio-economic characteristics of urban slum dwellers in Dhaka and Chittagong city;

- To examine the access to and burden of treatment cost borne by the urban poor households;

- To compare the morbidity and health-care seeking behaviour of the two vulnerable groups;

- To examine the individual and household level factors associated with health care utilisation.

Methodology

To identify slums in the study locations, one must have a working definition of a slum community. The definition used by Bangladesh Urban Health Survey (NIPORT, ICDDR,B, ACPR, 2006) of Bangladesh had four criteria to identify slums. These included:

- Poor housing conditions;

- High overall density;

- Poor environmental services; and

- High prevalence (over 75 per cent) of people with income below the poverty level.

If an urban area was comprised of at least 10 households or was a mess unit with at least 25 members and appeared to satisfy these criteria, then this category was also considered as slum area in the 2006 Urban Health Survey of Bangladesh.

The study will be based on household survey conducted in slum and squatter settlements/pavements of Dhaka and Chittagong city. A sample of 1000 poor and low-income households living in the slum clusters and pavements (600 from Dhaka and 400 from Chittagong city) will be selected for the present study. Since the proportion of pavement dwellers is much less compared to slum dwellers, a greater number of households from slums and lesser from pavements will be selected in each city.

We propose to select 600 households from Dhaka in the following way. Slum households will be selected from three different categories of slums spread over the entire city: large slums (having concentration of more than 300 households), medium slums (with 30 to 300 households) and small slums (having concentration of less than 30 households). From each category of slum, 150 households will be selected. This will give a total of 450 slum households in Dhaka city. Similarly, 150 households from

pavement settlements (spread over different locations of Dhaka) will be selected. Thus, a total of 600 low-income households in Dhaka city will be selected. In the same way, a total of 400 poor households will be selected from Chittagong city–300 from slum category (100 each from large, medium, and small category of slums) and 100 from pavement category.

Information will be obtained on whether anybody in the household experienced some sort of health problem (symptoms, sickness, illness or accidents) and the type of treatment sought. The following variables will be selected for the study: type of illness, form of health care/treatment received, reasons for opting for self-care or medical care, and socio-demographic factors.

Policy Implications

An understanding of morbidity pattern and health care utilisation is essential prior to designing any health service delivery system for the urban poor. Policy directives related to primary health care in Bangladesh have so far been formulated for rural areas only. Though a significant proportion of urban population lives in urban slums without access to basic health services, primary health care provision for urban poor and slum dwellers remains neglected.

Bangladesh faces the challenge of providing primary health care services to a slum population of more than 4 million in Dhaka city alone; the issue of providing basic health services for the slum and marginalizes urban population requires the immediate attention of policy makers, given the rapidly growing urban/slum population.

It is expected that the findings of the present study would help planners, policy makers in designing an appropriate health policy primarily focusing on expanding health services to unrecognised slums where the need is the greatest.

Broad Theme:
Macroeconomic Policy Analysis

Name of Study: Impact of Minimum Wage in the RMG Sector of Bangladesh: A CGE Analysis

Research Team: Nazneen Ahmed, Senior Research Fellow

Budget: Tk. 1.0 million

Time Frame: October 2011-June 2012

Rationale and Objectives

The readymade garment sector (RMG) is the largest foreign exchange earning export sector of Bangladesh. More than 3.5 million workers are working in this sector dominated largely by females. The main comparative advantage of Bangladesh RMG sector is availability of cheap liberalisation i.e. wage rate of RMG workers of Bangladesh is comparatively lower than other competitors of Bangladesh such as India, China, Cambodia and Vietnam. However there are widespread concerns over the wage situation of the RMG workers of Bangladesh. At the outset of pressures from various quarters a government formed National Wage Board now sets minimum wage for different categories of RMG workers. Increase in this minimum wage has potential implications for both entrepreneurs and workers. As the RMG workers have close link with rural economy, the wage increase is expected to extend impact on the rural economy.

This study will look into the impact of increase in minimum wage on income and livelihood of RMG workers. This will also explore the impact of setting minimum wage for all manufacturing enterprises.

The main objectives of the study are:

- To find out the impact of minimum wage increase on the livelihood of workers with special attention to RMG workers;

- To explore how the entrepreneurs respond or adjust with the regulation of the increase in the minimum wage;

- Welfare impact of the wage increase.

Methodology

Economy wide computable general equilibrium model will be used for this exercise. The model will utilise the latest available Social Accounting Matrix (SAM) for Bangladesh.

Policy Implications

When it comes to the issue of increasing wage of RMG workers, the entrepreneurs tend to suppress the action as much as possible, while the workers sometimes get themselves involved in violent agitation. It becomes crucial for the policy makers to understand the impact of wage increase on entrepreneurs and workers, so that they can come up with reasonable increase in minimum wage. This study will help the policymakers to have better information and understanding of impacts of wage increase and thus they will be able to

make better decision regarding the magnitude of wage increase.

Broad Theme: *Investment, Manufacturing Industry and Liberalisation Standards*

Name of Study: Industrial Policy and Export Industries of Bangladesh: Analysis for Strengthening External Competitiveness

Research Team: Narayan Chandra Nath, Research Fellow

Budget: Tk. 1.0 million

Time Frame: October 2011-June 2012

Rationale and Objectives

Export is regarded as engine of economic growth and forms on integral part of development. Therefore, strategic policy options for development deserve careful attention. The problem has become more important in the changing world economic environment after the global financial crisis and prevailing problems of export industries at home. This provides rationale to analyse the structure and determinants of export performance and explore the new opportunities of export development. We need to study the competitiveness of export items and markets and to address the problems in the way of enhancement of competitiveness of export industries. We need to study appropriateness of industrial policy regimes for export development in the context of problems faced by the sector and in the context of present global trade regimes.

The objectives are outlined as follows:

a. To analyse the structure of the exports by commodities and destinations and their trends of growth;

b. To explore the problem areas of export industries and review existing incentive policy regimes and facilities;

c. To explore the determinants of export performance;

d. To study the competitiveness of major export items;

e. To explore the newer export opportunities and scope for export diversification.

Methodology

a) Data Source

    i. Data base of BBS, NBR, EPB, Tariff Commission,

BB, Ministry of Finance, Ministry of Commerce, Ministry of Industries, BOI, WTO, UNCOMTRADE, UNCTAD, ADB and World Bank.

ii. Qualitative information generated through consultation with the stakeholders like chamber of commerce and industries, business association, policy makers, individual exporters and export industrial units.

iii. Visit of 30 export industries and gather information relating to specific problems of competitiveness and required incentive measures and supportive facilities by the government

b) Method of Analysis

i. Calculation of RCA and other indices of Competitiveness

ii. Regression technique

iii. Estimation of performance indicators of export industries

iv. Tabular Analysis and graphic presentation

c) Specific Thrust of Analysis

Analysis would be done at both Commodity and market destination level along with aggregate level and level of export industries subsectors. Data for time series analysis would cover the period of 1973-2010. Analysis of structure of export would be in terms of trade restrictiveness and liberalisation of economic regimes. Our proposition is to present the indicators of export performance in the phases of 1973-79, 1980-85, 1986-90, 1991-95, 1996-2000, 2001-05 and 2006-11.

Policy Implications

The study would help in understanding the changing global environment and identifying the opportunities for export expansion of Bangladesh. This will help identification of potential products and markets for the development of export sector specific problems required to be addressed to help export expansion. The research analysis would pinpoint the lapses in the existing policy regimes and help in visualizing the directions of policy changes required to strengthen international competitiveness of exports from Bangladesh and creating inputs for a more facilitating export expansive regime for Bangladesh.

Broad Theme: *Growth Issues and Regional Development*

Name of Study: Size and Growth of the 'Middle Class' in Bangladesh during 1990-2010: Implications for Broad-Based Growth and Development

Research Team: Binayak Sen, Research Director, Iqbal Hossain, Research Associate and Moogdho Mim Mahzab, Research Associate

Budget: Tk. 1. 0 million

Time Frame: October 2011-June 2012

Rationale and Objectives

The research has been specifically designed to work on the emergence and development of the "new" Middle Class over the last two decades (as opposed to the "old" Middle Class of the 1950s and 1960s who had strong links with agriculture). The argument is that the emergence of a sizable Middle Class has economic implications for higher savings, productivity growth through development of new technologies, improved functions of cities, and for more broad-based (equitable) growth. Most of the previous studies in the Bangladesh context were highly concentrated on poverty reduction issues with emphasis on the moderate poor and the extreme poor. The economic Middle Class has not received much attention as a subject matter in studies of growth and distribution until recently. While this class, by definition, is located above the poverty line it is susceptible to downward mobility pressures. The study seeks not only to analyse the social significance of Middle Class but also its economic significance.

The key objective of the study would be to quantitatively capture the emergence and growth of the new Middle class, especially in the last two decades of economic reform and growth acceleration. This will help to address the question as to how broad-based has been Bangladesh's economic growth in the past and what additional measures can be undertaken to make such growth process more inclusive in transiting to the Middle Income Status. Consequently, addressing the mobility concerns of the Middle class would be an important ingredient of this study. The other objective of the study would be to draw implications for developing more inclusive democracy a factor that would be conducive of political stability and determine the political context for

adopting a more equitable policy in Bangladesh.

Methodology

The study seeks not only to analyse the social significance of Middle class but also its economic significance. Broadly, there will be three components in this study.

First, using a "suitable definition" of the Middle class (which itself is a subject matter of the proposed research given the wide variation in approaches to quantification of the size of the Middle class in the global literature), it will capture the size and trends of the Middle class in terms of its income share, social composition and economic profile, including skill acquisition and employment structure. These trends will be verified through alternative approaches in defining the share of the Middle Class.

Secondly, it will analyse the economic drivers that may have influenced the emergence of the "new" Middle class,with focus on higher education, expansion of formal sector jobs, remittance, export-oriented production, NGO-led docial enterprises, and enhanced corporations.

Thirdly, the research will shed light on strengthening the role of the Middle class in shaping "inclusive" democracy and citizenship, which have implications for the coverage and quality of public service delivery.

Policy Implications

To quantify the size and trends of the middle class during the period of 1990 to 2010 would be one of the major concerns of this study. Defining the Middle class it self would be a historical and significant landmark for Bangladesh economy and for its policy perspectives. What are the structural changes that have been occurred into this class since 1950s and the 1960s would be another issue to be addressed. Then comes the "drivers" of Middle class, which would be identified under this study. Lastly, the political influence of the Middle class for an inclusive democracy would be tested under this study.

Name of Study: Revisiting the East-West Divide: Economics of the Spatial Gaps between the Leading and Lagging Regions of Bangladesh

Research Team: Binayak Sen, Research Director, Mohammad Yunus, Senior Research Fellow, Zulfiqar Ali, Senior Research Fellow, Iqbal Hossain, Research Associate and Moogdho Mim Mahzab, Research Associate

Budget: Tk. 1. 0 million

Time Frame: October 2011-June 2012

Rationale and Objectives

In recent years concerns have been voiced over the persistent gap in living standards between the lagging and leading regions in Bangladesh. Findings based on the 2000 and 2005 HIES earlier showed a widening gap in consumption expenditure between the eastern and western parts of Bangladesh. This has come to be known in the literature as the "East-West" divide. The more recent poverty data based on the HIES 2010, however, seem to indicate signs of moderation of the previous trend. This study attempts to understand this changing pattern of spatial inequality in Bangladesh.

The idea of persistent regional inequality can be traced back to Gunnar Myrdal's hypothesis of "cumulative causation", which articulated the idea of multiple equlibria based on increasing returns in the favoured region. Recent advances in new trade theory and new economic geography, which incorporated the effects of scale economies in production and marketing, lend further support to the presence of increasing returns to

scale due to agglomeration economies.

Another important insight from new spatial economies is that, contrary to conventional economic analysis, human capital moves to where it is abundant, not scant, meaning that policies should not act against the market force that pulls skilled people together. According to this view, the main policy challenge in addressing spatial inequalities is to help firms and workers reduce their distance from density where the main mechanisms are: mobility of skilled workers out of lagging regions, reduction of transport costs through infrastructural investments in the lagging regions and greater domestic remittance flows back to the lagging regions.

The key objective of the study is to analyse the persistence of the observed living standard differences between the leading regions from lagging regions of Bangladesh, and to suggest concrete policies to address the 'avoidable' spatial inequalities. The study will assess the relative role of Spatially-blind and spatially-targeted policies in addressing the East-West divide. Specifically, the study will examine the changing spatial dynamics along the national geographic scale with specific reference to the so-called East-West divide-divergence earlier

and convergence later (although the evidence is quite mixed even on the trends aspects of spatial gaps).

Methodology

It is in this context of spatial policy debate the proposed study will examine the trends in inter-regional gaps within Bangladesh and examine the nature of economic forces that may have widened or reduced these gaps.

The study will apply the "density, distance and division" (3ds) framework to seek first a possible explanation for the observed living standard outcomes across space, with special focus on the concentration of economic activities, distribution of human capital, increased connectivity and migration and differential exposures to vulnerability.

Policy Implications

This study is utmost important for the policy makers to address the burning issue of spatial gap between regions of Bangladesh. The above observations often lead to the claim of "spatially unbalanced growth, but spatially balanced development". The problem is that such proposition has not been tested with historical and recent development data in the context of Bangladesh. As a result, the main policy stance on addressing the spatial gaps remains ambiguous (beyond undertaking a variety of "social safety net" for the lagging regions). The main policy dilemma here is to determine the extent to which one needs to be spatially redistributive and to analytically define what is to be counted as unavoidable as opposed to avoidable spatial inequalities.

Externally Sponsored Research Studies

Broad Theme: *Agriculture, Food Security and Rural Development*

Name of Study: Improving Food Security through Value Chain Management: A Study of Rice Value Chain in Bangladesh

Research Team: Mustafa K. Mujeri, Director General, Nazneen Ahmed, Senior Research Fellow, and Iqbal Hossain, Research Associate

Sponsor: International Food Policy Research Institute (IFPRI)

Budget: Tk. 1.9 million

Time Frame: October 2011-June 2012

Rationale and Objectives

'Food security at the individual, household, national, regional and

global levels is achieved when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life' (World Food Summit 1996). As rice is the main staple, food security in Bangladesh very much depends on its adequate availability and accessibility throughout the year. Total food grain availability in 2010-11 was 9 per cent higher than that in 2009-10. There are two main concerns of the study:

- importance of rice to food security
- limitations of traditional food security policies e.g. These are costly and can distort the rice market

A competitive strategy needed policies with more reliance on market encourage private sector trade and stock management. Value chain management (VCM) improves competitive advantage of rice industry and thereby food security. VCM is the management of all activities in production, distribution and marketing systems, improving process and relationships to support efficient development and flow of rice from producers to consumers. There are three pillars of VCM: improved efficiency, competitive advantage, business to business marketing.

VCM will create opportunities and provide incentives to:

- reduce risks and uncertainties
- capture efficiencies and control cost
- respond to changing consumer demand
- lower transaction costs
- focus on agribusiness units and business to business relationships for raising return to network
- integral approach covering suppliers of inputs to consumers and vice versa

The broad objectives of the study will be to link VCM and food security and analyse whether VCM can improve competitive advantage of Bangladesh rice industry. If so, how it can be achieved in practice. It will contribute to food security policy because of link between competitive rice value chains and improved food security. Both VCM and food security have common interest in competitive advantage. To attain the above objectives the research questions are:

Q1: What are the characteristics of the typical rice supply chains (e.g. modern, traditional, and others) in Bangladesh? Examine importance of transactional and asymmetric dependence-based relationships in

determining the nature of integration among key actors in the rice value chain and linkages among them.

Q2: What challenges need to be addressed to implement an effective management plan?

May include: large number of small farmers, lack of perceived need to collaborate, strong focus on production and lack of understanding of the importance of value chain management initiatives, weakness of existing (e.g. public) processes and danger of creating management traps.

Q3: How the current trends of increasing demand for more differentiated rice following the rapid growth of supermarkets can be utilized to create more positive value chain management opportunities in the country?

Q4: Would it be beneficial for the government to move from its current "production focus" towards a more "whole chain" focus?

Q5: How small farmers are likely to benefit from any improved value created in the chain especially in the absence of collaborative supply chain relationships and exclusive dependence of small farmers on primary market agents?

Q6: What role government can play in moving towards a whole chain orientation? e.g. facilitation, education, support for the uptake of chain management practices, etc.

Methodology

A multiple case study approach will be employed to study variation in rice value chains. Typical value chains will be studied to capture diversity of value chain relationships and range of product, financial and information flows within and across value chains.

Specific choice of methods will be selected to answer research questions; both quantitative and qualitative data are required. Data will be collected from two sources: primary and secondary. Primary data from field observation and semi-structured interviews with value chain participants, purposeful sampling method to select value chain participants. Some information will be taken from existing surveys including IFPRI 2010 survey. Both inductive analysis and marketing margin analysis will be used.

Policy Implications

- Importance of rice to food security and the potential of VCM are the drivers of this study.
- Analysing major variants of both modern and traditional rice value chains, the study would bring out nature of

products, financial and information flows of rice value chains; nature of relationships; and how consumer value created and distributed.

- The study will also identify drivers of firms' competitive advantage in the value chains and explore whether and how VCM can improve competitive advantage and food security.

- It is more likely that consumer value in rice value chains is not shared equitably (most consumed by rice millers?); relationships are characterised by power imbalance (larger buyers downstream and rice millers upstream and farmers disadvantaged?).

- As rice becomes more differentiated, importance of dependence based relationships rises; farmers' bargaining power reduces as farmers focus on complying millers' requirements.

- Asymmetric dependence based relations lead to reduced farmers' income, selling paddy on farm at low price after harvest, no opportunity to create value beyond farm gate or postponing sale to wait for better price.

- From food security perspective, the study would address the issue: whether better for government to adopt a whole chain perspective with a VCM orientation or continue with its current narrow production focus

- Contribution to better policies and strategies leading to enhanced competitive advantage, adoption of specific approaches for different value chains, and development of a more value driven rice industry in Bangladesh.

Name of Study: Improving the Effectiveness, Efficiency and Sustainability of Fertilizer Use in South Asia

Research Team: Mustafa K. Mujeri, Director General, Kazi Ali Toufique, Senior Research Fellow and external researchers from India and Nepal

Sponsor: Global Development Network (GDN) and South Asia Network of Economic Research Institutes (SANEI)

Budget: US$ 0.4 million

Time Frame: September 2011- March 2012

Rationale and Objectives

Fertilizer is one of the key inputs for increasing crop yields. Fertilizer use had a great impact in crop yield in countries of South Asia. In 1975-76, fertilizer application was 0.36 kg per hectare of agricultural land, whereas in 2007 it was above 298 kg. This rise in fertilizer use has significantly increased crop yield. The use of fertilizer became more widespread and intensive with the introduction of high yielding varieties of rice. However, the use of fertilizer is still far from being efficient, effective and sustainable in these countries. The countries also face a rapidly growing population and are at great risks from climatic changes. So in order to ensure food security for the people the countries need to improve the efficiency, effectiveness and sustainability of its fertilizer use.

While privatisation of fertilizer distribution in most countries has generally improved the availability of fertilizer, it has not necessarily succeeded in eliminating supply bottlenecks and ensuring fair prices of fertilizers at the farm level. Fertilizer subsidy has also not guaranteed farmers the proportionate benefits, as major share of subsidy benefits is still being grabbed by the rich farmers. Furthermore, the unbalanced use of fertilizer and deficiency in organic matters are rapidly deteriorating the soil fertility status.

This study will highlight the current issues in fertilizer production, marketing and distribution system in Bangladesh, India and Nepal. It will also analyse the current subsidy systems and provide overviews of the impact of fertilizer use on the environment.

Some of the questions that will be addressed in this study are:

- What is the evidence of physical rates of return to fertilizer use? Are physical rates of return consistently high? How sensitive are the returns to the availability of other inputs, including water?

- How important are transport costs, timeliness of supply, and quality issues in affecting farmers' decision about fertilizer use? How do rates of usage differ across crops and production systems?

- How significant are the environmental problems associated with fertilizer use and overuse? Are usage levels high enough to create significant problems for water contamination or soil acidification? Do farmers appear to be using fertilizer efficiently and sustainably?

Policy Implications

The study will provide some useful policy recommendations that can improve the effectiveness, efficiency and sustainability of fertilizer use in South Asia.

Name of Study: Barriers to Development of Livestock and Fisheries Sub-Sectors.

Research Team: Kazi Ali Toufique, Senior Research Fellow and S M Zulfiqar Ali, Senior Research Fellow.

Sponsor: International Food Policy Research Institute (IFRRI)

Budget: Tk. 2.3 million

Time Frame: October 2011-March 2012

Rationale and Objectives

The fisheries and livestock sectors are two major pillars of Bangladesh economy and livelihoods of a large group of population of the country. These sectors are also important for food, nutrition, income, export earning, draft power, bio-fertilizer, and transport. More than 10 million people are directly depending for their livelihoods on these sub-sectors; besides, these sectors also support a large proportion of rural population indirectly. The fisheries sector is vibrant which contribute about 20% of agricultural GDP and

livestock sector contribution is around 12%. These two sectors provide the major dietary protein.

Bangladesh is fortunate enough having an extensive and huge water resources scattered all over the country in the form of small ponds, beels, lakes, canals, rivers and estuaries covering an area of about 4.57 million ha, employing about 1.4 million people. The country has a coastal area of 2.30 million ha and a coast line of 714 km along the Bay of Bengal, which offers a great potential for marine fisheries production. The livestock sector contributes largely to rural poor through income and employment generation. It offers sustained employment opportunities particularly for the rural poor.

The potentials of the fisheries and livestock sectors are, however, not fully utilized. There are considerable opportunities of increasing productivity through scientific application of technologies and appropriate management practices.

Given the above, it is important to review the sectoral policies and management of fisheries and livestock to achieve sustainable development in these sectors. Specific research questions of the present study would therefore include the following:

1. What are the specific policy barriers in fisheries and

livestock that are hindering the growth of the sectors?

2. What are the management and operational difficulties that the fishermen and the smallholders are facing in the sectors?

3. What are the transaction-cost barriers for commercial producers, smallholders, rural poor and women in livestock and fisheries product markets?

4. What could be the desired roles and responsibilities of the government and other stakeholders to achieve sustainable development in the sectors?

Methodology

For fisheries, both primary and secondary level data will be used to carry out the study. However, given the time and resource constraint, emphasis will be given on the secondary sources. Secondary data will be collected from the Fisheries Resources Survey System of the Department of Fisheries (DOF) and relevant other sources. Primary data will be collected from selected study sites – one from the area of capture fisheries (e.g., chalanbeel or haor areas) and another from the area of pond aquaculture (e.g., Mymensingh or Comilla). Both quantitative and qualitative data will be generated using mainly the semi-structured interviews and focus-group discussions.

Similar approach will also be taken for the livestock component. Data will be collected from the Department of Livestock (DLS), other secondary sources and primary surveys as in the case of the fisheries sub-sector mentioned above.

Policy Implications

There are several policy barriers in the sectors that are hindering the growth of the sectors e. g. policy barriers for dairy value chain development and management of public water bodies for sustainable development of fisheries and also many anomalies and barriers in the official leasing policy of water bodies along with other problems. The study will provide inputs in setting the roles and responsibilities of the government and other stakeholders to achieve sustainable development and reducing the existing problems in the sector.

Name of Study: Structure and Growth of Rural Non-Farm Sector in Bangladesh: Implications for Household Income and Employment

Research Team: Rushidan Islam Rahman, Research Director and

Badrun Nessa Ahmed, Research Associate

Rationale and Objectives

The recent changes in the sectoral composition of GDP in Bangladesh have attracted attention of both researchers and policy makers. During the last two decades the share of agriculture has gone through a large decline with a corresponding increase in non-agriculture's share. Such change has also been associated with structural change in employment. Theories of economic growth usually visualise a structural change in employment and economic growth through transfer of liberalisation from traditional to modern sector. Growth of non-farm sectors in the rural areas can help reduce cost of liberalisation out-migration and can improve regional equality. Therefore, research on growth of income and employment through expansion of RNF should be a priority.

A large number of studies on RNF have focused on various research questions. Most of these are based on sample surveys which focus on selected areas/sectors and are not representative of the national picture. Changes in the share of RNF in total income and employment of households representing the national picture should be the starting point of research on RNF.

Most of the research on rural non-farm activities and on the choice between farm and non-farm activities focused on the choice of broad non-farm sector and not on the detailed sub-sectors. It must be recognised that the choice of various types of non-farm activities is likely to require a different set of qualifications and personal assets. Therefore, the present study proposes to examine the extent of expansion of different sub-sectors of non-farm activities. Moreover, the extent of self-employment compared to paid employment in non-farm sector should receive attention.

A slow growth of employment and wage rate in agriculture, high poverty incidence among casual workers and slow growth of regular employment in formal sectors led to the realisation that non-farm self employment can offer an alternative strategy for income and employment growth as well as for poverty reduction.

The proposed study will examine the role of rural non-farm activities (RNF) from the point of view of employment

and income generation for poor households. The analysis will encompass both self-employment and wage based employment with various forms of contract. An analysis of the prospects that such employment expands with the benefits flowing to low income households requires detailed investigation of rate of return from these activities and wage rates. Therefore, the returns from various sub-sectors of RNF and wages of paid workers of these sub-sectors will be compared with wages prevailing among agricultural workers as well as among unskilled urban liberalisationers.

Previous studies have shown that RNF comprises of both dynamic and backward activities. An attempt will be made to examine how far the variation of return and wage takes place within sub-sectors and between sub-sectors. This will reveal whether the dynamic and stagnant enterprises coexist within the same sub-sector or some sub-sectors are dynamic and others are lagging, which will have important policy implications.

Before concrete policies are adopted for promoting rural non-farm activities for poverty alleviation, one must examine whether the liberalisation force from poorer households can depend on such employment for generating sustained income above poverty threshold. There will be barriers to entry and problems of low productivity, resulting in lack of sustained and sufficient earning.

Influence of regional characteristics will be examined because RNF of various types are usually concentrated in different regions. Household Income Expenditure Surveys (HIES) provides "divisionwise" representative data. Therefore, the sub-sectorwise distribution of RNF in the divisions and the share of income and employment in the major RNF sub-sectors in each division will be traced.

Methodology

The study will undertake a review of existing research focusing on the questions selected for the present study. The specific questions chosen for the proposed study will be analysed on the basis of quantitative data obtained by national sample surveys. In particular the unit record data of HIES will be reanalysed. The quantitative data will be supplemented by case study materials collectd specifically for the present study.

Policy Implications

The study will highlight policies for promoting the dynamic RNF. Policies will be suggested for integrating the

poorer regions and assetless households into RNF activities.

Name of Study: Public Stock Policies for Improved PFDS in Bangladesh

Research Team: Quazi Shahabuddin, Professorial Fellow, Mohammad Yunus, Senior Research Fellow

Sponsor: International Food Policy Research Institute (IFPRI)

Budget: Tk. 1.5 million

Time Frame: October 2011-June 2012

Rationale and Objectives

Historically, public intervention in the food grain market in Bangladesh has been quite pervasive. However, the remarkable changes in agriculture and the food economy that have occurred since independence, especially during the past two decades, lessened the need for government intervention in the market to stabilise prices. Increased domestic food grain production, lower real prices of rice, well-integrated and more efficient food grain markets, reduced seasonal price variations and trade liberalisations in the early 1990s have combined to reduce variability in supply and prices. Nevertheless, the government must provide emergency relief during periods of natural disasters, alleviate chronic food insecurity through targeted food distribution to poor households and intervene, when necessary, to stabilise market prices. To accomplish these tasks, adequate public stocks are needed for emergencies as well as for regular distribution. Moreover, the recent escalation in food prices and the increased exposure of domestic market to external shocks, the need for expanded role of government in general and for strengthening the PFDS in particular have assumed greater significance in recent years.

PDFS maintains stocks in order to: (a) provide emergency relief during periods of natural disasters, (b) alleviate chronic food insecurity through targeted food distribution to poor households, and (c) take steps, when needed, to stabilise the market price of food, especially rice. The costs of procuring, storing, managing and distributing large stock of food grains are high. So it is important the government does not hold more food than it needs for an adequate national food reserve.

It may be emphasised here that grain reserves are costly to maintain and divert public expenditure from other investments aimed at increased agricultural production (for example,

rural infrastructure and/or improved technology). Determining the minimum level of grain reserve is, therefore, very important (World Bank 2008). Moreover, it is important to note that the same amount of grain cannot simultaneously serve the three objectives of providing an adequate safety net for the poor, stabilising market prices and providing emergency relief. There are inevitable trade-offs between the three objectives. For example, a sudden emergency may require stocks to be drawn so low that normal distribution of grain is no longer feasible and must be postponed or even cancelled or targeted to those most in need. Thus acceptable stock levels need to be analysed for each purpose, together with a review of alternative instruments available outside the PFDS (Shahabuddin et al., 2009).

Bangladesh faces really difficult challenges given the way the regional and global rice markets behaved in 2007-08 and continue to behave rather erratically. There will thus be a strong political, even popular pressure to hold much larger stocks. Some will remember about Bangladesh's extraordinary vulnerability during the mid-1970s and would argue that Bangladesh should increase substantially the size of the public food stock. However,

seeking greater food security in this way may not be the answer or at least the complete answer.

Proper management of public stock is essential for the improved effectiveness of PFDS. As mentioned earlier, the government has to maintain rolling stocks to cater to the routine needs of the PFDS including safety net programmes and open market sales, as well as maintain buffer stocks for emergency distribution in times of natural disasters. This calls for careful planning and management of the amount of grains to be stocked and distributed, and for the establishment of storage facilities and the improved monitoring of existing storage quality.

No attempt will be made here to estimate the optimal foodgrain stock since this would involve the development and operation of a dynamic programming model for foodgrain sector to carry out optimisation exercise as Goletti et al. (1991) and Goletti and Rich (1998) did earlier. However, a comprehensive and rigorous analysis of costs and benefits of alternative PFDS stock options will be conducted in this study to examine what feasible options the PFDS have in order to meet its objectives in a cost-effective manner. This would contribute towards better management and improved

effectiveness of PFDS in Bangladesh. Needless to add, apart from analysing alternative PFDS stock options, proper management of public stock also involves, among others, analysis of stock movement, stock rotation and storage as well as transit losses.

Methodology

The methodology in exploring alternative stock options based on costs and benefits of PFDS will essentially adopt the approach followed by Dorosh et al. (2004). This is basically premised on the fact that although the GoB financial accounts of the PFDS record the receipts and outlays of the Ministry of Food, these accounts record only financial flows at "book values" of the commodities and do not include adjustments for changes in prices due to market conditions and/or stock quality. Assessing costs and the size and distribution of PFDS benefits requires an accounting system that values grain at market prices. In other words, since benefits to consumer depend on market price and the quality of grains that they receive, proper assessment of costs and benefits of PFDS need to be based on an accounting system, which adjusts for these factors. More specifically, the financial accounts of GoB for PFDS will be analysed,

following the above approach, in order to (i) estimate various cost components, (ii) estimate consumer and producer subsidies (iii) determine cost-effectiveness levels of public stock and distribution, and (iv) suggest options for improving the efficiency of the system.

Policy Implications

- Proper management of public stock is essential for improved effectiveness of PFDS. This calls for careful planning and management of the amount of grains to be stocked and distributed, for the establishment of storage facilities and for improved monitoring of existing storage quality.

- A comprehensive and rigorous analysis of costs and benefits of alternative stock options will be conducted to examine what feasible options PFDS has in order to meet its objectives in a cost effective manner. Needless to add, public stock management policies also involve, among others, analysis of stock movement, stock rotation and storage as well as transit losses and how to minimise these losses.

- One important indicator of efficient stock management would be a good balance between actual stock of food grains and a carefully estimated budgetary target of stock at a specific point of time. However, the target itself may require revision because of unforeseen events such as natural disasters.

- The direct costs of increased distribution are clearly shown in government accounts. However, the costs to consumers of quality deterioration of PFDS food grains are not accounted for. Closer attention should be paid to the quality of food grains in storage and the link between the size of the stock and the amount of distribution needed to rotate stocks.

- The role and effectiveness of food-based safety net programmes need reevaluation, keeping in view such considerations as whether greater use of cash-based transfers is warranted and whether targeting effectiveness and flexible use of stocks can be improved. Early Warning Information System, both within the country and regionally/globally, to anticipate and prepare for possible future food price hikes and volatility needs to be strengthened.

- The potential trade-offs between different uses of public stocks for regular distribution, emergency distribution and price stabilisation need to be further analysed. Also, since PFDS is costly, the possibilities for balancing distribution through priced and non-priced channels should be further explored.

Name of Study: Farmers' Supply Response to Price and Non-Price Factors in Bangladesh

Research Team: Mohammad Yunus, Senior Research Fellow and Quazi Shahabuddin, Professorial Fellow.

Sponsor: International Food Policy Research Institute (IFPRI).

Budget: Tk. 1.383 million

Time Frame: October 2011-June 2012

Rationale and Objectives

Bangladesh has undertaken trade liberalisation including agricultural

liberalisation since 1986 in the hope that reforms emphasising price incentives will encourage producers to respond. Significant progress made so far includes devaluations of taka and adoption of flexible exchange rate regime, as well as decontrol of agricultural prices, especially input prices, and reduction of tariffs. The rationale behind agricultural liberalisation is that the biases against agriculture discourage production so that reforms introducing price incentives will encourage producers to respond.

However, the reforms seem to have introduced greater uncertainty into the domestic market given increased price volatility in the global market. Besides, Bangladesh agriculture remains exposed to the vagaries of nature (variability in monsoon rainfall during the Kharif–1 and Kharif–2 seasons). This study therefore models supply responses in Bangladesh agriculture that include the standard arguments as well as price risk.

Previous studies have tended to model supply response based on the assumption of perfect knowledge and information about price and production (Rahman 1986, Alam 1992, and Yunus 1993). Less attention has been paid to capturing the impact of risks and uncertainty on agricultural production and supply response in Bangladesh agriculture. Proposed study will incorporate these risk factors in the model.

Since the nature of market and non-market factors adds to risk and uncertainty in farm decisions, the study would aim at modeling the production and supply response in Bangladesh agriculture by including both the standard arguments and risks. The study attempts specifically to:

- Determine whether Bangladesh agricultural supply is price and price risk responsive;

- Examine the aggregate and sub-aggregate and selected individual crop supply responses of Bangladesh agriculture to price and price risk; and

- Evaluate the impact of structural breaks on Bangladesh agricultural supply response.

Methodology

The data would be collected from various secondary sources, including BBS, Bangladesh Bank and would be analysed using standard cointegration and vector correction models. The analysis will begin with examination of the time series properties of the variables used and

their order of integration determined using augmented Dickey-Fuller (ADF), Phillips-Perron (PP) and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) unit root tests.

If the null of non-stationary cannot be rejected, then a variable contains unit roots and hence it is not stationary. If its first difference is then tested and found stationary, it is I(1). Given that a variable X is I(1), the analysis proceeds to test for cointegrating relationship. If cointegration exists, error correction model is estimated. If not, the analysis continues with ADL modeling of the supply response.

The study would look into own price effect, yield effect, real exchange rate effect, risk effects, and institutional effect. The coefficients of own price and yield are expected to be positive. It is expected that the movement of the real exchange rate would capture the substitution effects in both production and consumption (between traded and non-traded goods such as export crops and food crops or between food imports and domestic production). It is difficult to make an assumption about the signs of the coefficient since the impact of changes in real exchange rate would be mixed for exportable cash crops and food imports. The coefficient of the risk variable is expected to be negative as farmers are generally assumed to be risk averse. To capture the effects of the regime change, dummy variables (both additive and interactions with relevant explanatory variables where the slope may change) will be introduced.

Policy Implications

If farmers are price responsive, i.e., if the price elasticity is greater than one, then it can be used to design effective agricultural policy. Thus the findings of the present study are expected to aid policy makers and concerned authorities to take necessary steps that would lead to agricultural sustainability of the country.

Broad Theme: *Water Resources Development*

Name of Study: Bangladesh: Integrated Water Resource Assessment

Research Team: K M Nabiul Islam, Senior Research Fellow, M Asaduzzaman, Research Director and Mustafa K. Mujeri, Director General

Sponsor: AusAID-CSIRO

Budget: AUD 120,000

Time Frame: October 2011-September 2013

Rationale and Objectives

Water resources are under great stress in Bangladesh, with floods in the monsoon season, shortage of surface water in the dry season, arsenic contamination of shallow groundwater, salinisation of both surface and groundwater in the coastal zone, and difficulties with meeting demand in many urban centres. The increasing population and economic development in Bangladesh will increase the demand and the competition for water resources, exacerbating an already difficult situation. To add to the difficulties, changes in water quality and quantity are also expected as a consequence of climate change. Currently, there is no country-wide integrated assessment of water resources in Bangladesh or the interactions between water resources, their management and social and economic well being.

The aspects related to surface water uses and availability are well studied and modeled but information about ground water resources is still scarce and fragmented. Little is known about the interactions between surface and groundwater systems, the capacity of aquifers to sustain greater levels of use and the impact of climate change on the overall water availability in Bangladesh.

From a socio-economic perspective, there is a reasonable body of mostly localised work on aspects of how the surface water and groundwater are managed today, how this management is impacting livelihoods, and how these resources could be managed in the future to promote an efficient, sustainable and equitable use of scarce water resources. Little has been done to understand social and economic impacts of water resource management at system scale accounting for cross-sectoral and competing demands (e.g. agriculture and urban water use).

The research aims to develop an integrated water resource assessment to provide a national overview of the resource, the impacts of development and climate change on both surface water and ground water resources. It will assess the way impacts will affect the poor and the vulnerable, the amount of water that could be sustainably supplied to the different economic sectors such as agriculture, fisheries, industry and navigation, as well as to the population for drinking and sanitation purposes in order to promote economic growth and improve livelihoods of people.

Methodology

In the above backdrop, the research is multi-disciplinary in nature, bringing together hydrological, hydro-geological, socio-economic, climate change, social trend and other data in an integrated framework.

Therefore, the study will undertake an integrated approach through a) Surface water assessment, b) Groundwater assessment, and c) Socio-economic assessment. The socio-economic assessment involves examining socio-economic aspects. The integration will involve modeling macro-level and micro-level water demand and use in Bangladesh: that is, it brings together supply and use information assembled in the surface water and groundwater assessments, and models the changing patterns of use and demand with increasing population and economic growth.

The study will assemble a range of socio-economic data, including population, population growth, population structure (gender, age), income classes, access to water and sanitation, water use by sectors (including urban and industrial), and anticipated growth of sectors. The data will be obtained as far as possible at a spatial resolution of the district or, preferably, upazila level. Water demand by economic sectors including agricultural, industrial, urban and rural will be assessed through the customisation, validation and application of an existing computable general equilibrium (CGE) model.

Policy Implications

The information generated will help Bangladesh to develop policy responses to equitably and efficiently allocate and use water in the future. One of the major contributions of this research is related to identification of potential hotspots where there is high risk of contamination by saline intrusion or polluted surface waters, and where there is high risk of lack of access to safe drinking water and irrigation water in rural areas.

The research is also expected to contribute to capacity building of Bangladesh organisations on climate change impact assessment, groundwater assessment, and integrated water resources assessment.

Broad Theme: *Investment, Manufacturing Industry and Liberalisation Standards*

Name of Study: Productivity and Efficiency of Rice Mills in Bangladesh: Economic, Social and Food Security Implications

Research Team: M. Asaduzzaman, Research Director, Minhaj Mahmud,

Research Fellow, and Moogdho Mim Mahzab, Research Associate

Sponsor: International Food Policy Research Institute (IFPRI)

Budget: Tk. 3.36 million

Time Frame: August 2011-March 2012

Rationale and Objectives

In Bangladesh, the contribution to GDP of agriculture has fallen substantially over time. Yet, in absolute terms it has increased from 448.34 billion to Taka 701.96 billion i.e., by more than 56% at 1995/96 prices. Crop cultivation has kept its share in the overall agriculture at around 55-56% over this period. Rice dominates all other crops accounting for around 65% of the area under crops. The output of rice has increased from about 12 to over 30 million metric ton over the period of late 1970s to end of the first decade of the 21st Century. This means that the demand for processing rough rice i.e., paddy has increased very significantly over time.

Paddy may be dehusked and bran may be removed in several ways. There are or were two basic manual methods, hand pounding using a pestle and a mortar, or using *dhenki* (in which the pestle is iron tipped and fixed to a foot-operated long and thick pole), the mortar being a lined hole in the ground. The dhenki used to be the traditional milling tool in Bangladesh but has likely been replaced with more mechanised means over time as the total amount to be milled has risen sharply. The mechanised means now come in the form of a variety of machines operated by diesel or electrically driven motors along with various separating tools for the rice and husk and bran at different stages of operation. Then there is the pre-milling parboiling which may or may not be integrated with the actual milling. There is also a bewildering array of rather small, practically portable husking machines which are used by villagers. So at one end there is the traditional dhenki which is almost but not yet out of the scene and on the other spectrum is the large automatic rice mills which demand a ready supply of paddy for continuous operation. Yet, all are preceded by rather inefficient parboiling system wasting energy. In any case, the productivity, technical efficiency and scale economics of these technologies are likely to be vastly different with major implications for the country. The rationale of the study involves:

- Rough rice/Paddy produced in 1970 was 17.2 million metric ton; risen to 45-46 million metric ton in 2010–a huge leap. In terms of demand for processing–need faster technology.

- Technical efficiency in milling and the technology in use are major factors behind productivity and hence should be investigated to understand the productivity behaviour over time as well as processing capacity.

- Characteristics and capacity under different technology and their relative significance in terms of total processing.

- Auto large mills are reportedly fewer than others but have much larger capacity and higher productivity with potential monopoly in rice market and monopsony in paddy market: Thus having potential destabilising power and control over market intermediaries as often alleged.

- Stock behaviour of auto mills and others as well as networking with marketing agents and sellers of paddy may help explain paradox of rising price of rice despite high production levels.

- The hypothesis may be that due to higher productivity and capacity auto rice millers need to stock paddy more than others.

Methodology

To fulfill the scope of the work, the following activities need to be undertaken:

- Literature review both related to Bangladesh and similar major rice producing countries.

- Analysis (including econometric) of available statistical materials particularly relevant CMI/SMI data for the years 1995/96; 2002/03 and 2005 unit records of which are available.

- Analyse the information from the 2010 IFPRI household survey if it has information related to household processing of rice.

- Consultation with various groups of rice millers (of all categories including members of Rice Millers Association) as well as experts in technical aspects of rice milling for understanding the array of technology available and used in the country including their technical and economic

- characteristics, spatial distribution and growth over time.
- Draw a suitable sample of rice millers of various categories and also households engaged in home-based processing and conduct suitable survey for necessary quantitative and qualitative data.
- Statistical and econometric analysis of survey information.
- Efficiency estimation provides an indication of the per centage by which potential output could be increased in relation to the corresponding production frontier
- Technical efficiency for the ith firm is defined as the ratio of observed output to potential maximum output; So the coefficient of technical efficiency lies between 0 and 1.
- As production frontier cannot be observed directly, techniques have been developed to estimate efficiency.
- Parametric approach (frontier analysis- deterministic as well as stochastic).
- Non-parametric approach (Data Envelope Analysis).

- Assessment of results from various above analyses and other information for policy related to rice milling keeping in view the objectives of economic efficiency, social desirability and food security including nutrition.

Policy Implications

This study will reflect serious policy issues once it is done. The issue of food security is in line with behaviour of rice millers. To understand how the rice millers behave will be an important task to comply under the study. The total number of rice millers, their stocking behaviour and the differences in the technologies among different rice mills will be the highlight of the study. To capture the monopsony and monopoly behaviour of the rice millers if any, will be studied under this research. One, thus, needs to understand the dynamics of moving from traditional to modern rice milling the productivity, costs, stock and behviour which have major implications for rice price, employment (incl for female) and national food security.

Name of Study: An Evaluation of the Operations of the Equity Entrepreneurship Fund (EEF)

Rationale and Objectives

The traditional source of term lending in Bangladesh since the Pakistan days was development finance institutions (DFIs). During the early 1980s the DFIs indulged in extensive term lending that were motivated more by political patronage distribution and collusion between borrowers and agency personals rather than by the soundness of investment proposals. As a result, these institutions ran into huge amounts of loan default and became virtually defunct once aid agencies cut off the flow of fund for further disbursement of term loan. The vacuum in term financing continued for some time until in the early 1990s, the nationalised commercial banks (NCBs) sharply raised their level of term loan. The explosive growth of term lending by the NCBs was fraught with two critical problems. The main source of fund for these term lending was the bank's own loanable fund based on the deposits with the banks. This means that the banks were borrowing short and lending long–a nonviable arrangement for long term financing. Secondly, the quality of the loans suffered from the same types of problems as were observed in the case of the DFI lending. It is not surprising, therefore, that the number of non-performing loans of the NCBs started piling up quite rapidly.

The virtual demise of the DFIs and stricter control on term lending by the NCBs has nearly starved the private sector of Bangladesh of institutional credit in recent years. The experience of the 1990s has proved the point that commercial banks in Bangladesh are inappropriate replacement of the DFIs for meeting the country's potential demand for term loan financing. A number of investment companies that came into existence to cater to this need totally failed to realise their statutory objective because of their limited capacity to mobilise funds and their conscious choice to operate as quasi-commercial banks. The growth of the stock market and the inflow of FDI have also been grossly inadequate to make up for the short fall in institutional finance. This deficiency in term finance was largely responsible for the persistence of

high interest rate and consequent adverse effect on the growth of the private sector.

Clearly, there is need for new institutional initiative to resolve the problem of term finance in Bangladesh. With this concern in mind the government introduced the "Equity Development Fund" in 2000-01 with a budget of Tk. 100 crore. Later in 2001-02, it was renamed "Equity Entrepreneurship Fund " and initially its purview was limited to food processing and agro-based industries (excluding the conventional sub-sectors such as rice/flour milling, fishing trawler, cold storage, etc.) and IT sector. Since its inception, Bangladesh Bank has handled the fund through the Investment Corporation of Bangladesh (ICB).

There are no interest charges and the fund is disbursed on profit sharing basis for eight years. The entrepreneur makes available 51 per cent of the total project cost and the government provides the rest 49 per cent as equity. The entrepreneurs are required to buy back the government share in four steps within this period. The total project cost including net working capital of the project will have to be of minimum Tk. 0.50 crore for both IT and agro-based industries and maximum of Tk. 5.00 crore for IT

industries and Tk. 10.00 crore for agro-based industries.

Up to the end of FY2011, a total of Tk. 573 crore has been invested out of the fund in 284 projects, of which 248 were agro-based industries while 36 belonged to IT sub-sector. In FY 2011, the size of the sanctioned fund was Tk. 300 crore. Recently the ICB has proposed expansion of the coverage of the fund and a fresh sanction of Tk. 500 crore for FY2012 has been sought.

The broad objectives of the study will be to critically review the past operations of the EEP for assessing the following:

- How successful has the EEF been in meeting its prime objectives of raising investments in the two most promising sectors in Bangladesh, namely IT and agro-based industries?

- How efficient has the operation of the fund been?

- What factors contributed to its success and what factors hindered its performance?

- In what ways should the arrangements of the fund be modified to improve on its performance?

- What new sectors should be brought under the purview of the fund?

- What should be the medium term growth projection of the fund?

Methodology

The study will involve both primary data collection and desk based research. The existing secondary data available with ICB and Bangladesh Bank pertaining to the enterprises will be compiled and supplemented with a brief questionnaire survey of all enterprises under EEF. A scientifically drawn sample of 40 enterprises from agro-based industry and 20 enterprises from IT industry will then be subjected to in-depth interview to elicit detailed information on issues delineated under the scope of the study. In addition, perception surveys will be carried out of selected stakeholders including entrepreneurs in the same industry but outside the EEF. The data collected will be analysed using standard statistical tools of bi-variate and multi-variate analysis.

Policy Implications

Given that the EEF has been around for nearly 10 years now, it is high time that a comprehensive review of the operations of EEF is undertaken and decisions regarding future course of EEF operations should be made based on the outcomes of such review. The present proposal has emanated from such a concern.

Name of Study: Social Upgrading with Economic Upgrading: An Analysis of the RMG Sector of Bangladesh

Research Team: Nazneen Ahmad, Senior Research Fellow

Sponsor: University of Manchester and Marks & Spencer

Budget: Tk. 1.0 million

Time Frame: September 2011- February 2012

Broad Theme:
Macroeconomic and Trade Policy Analysis

Name of Study: Impact Assessment of Development Paradigms and Related Policies: Analysis with Dynamic CGE Modeling

Research Team: Nazneen Ahmed, Senior Research Fellow, Moogdho Mim Mahzab, Research Associate, and external researchers

Sponsor: Food and Agriculture Organisation (FAO)

Budget: BDT 1.0 Million

Time Frame: July 2011-December 2011

Rationale and Objectives

The study aims to provide long term policy assessment to some critical development issues for Bangladesh through the use of dynamic CGE model to support the government policy making process. A complete dynamic CGE model is intended to develop with the latest Social Accounting Matrix (SAM) of Bangladesh. Broad topics like food security, poverty and inequality, employment, investment, external sector and assessment of the five year plan would be brought under the investigation of this study.

As mentioned, this exercise is mainly an outcome of the training on CGE held at Rome, Italy in the FAO headquarter. There will be two more country papers of Kenya and Burkina Faso along with Bangladesh. As CGE has become an instrumental tool for economists to analyse the general equilibrium, this paper aims to develop a compatible model of Bangladesh economy with the help of the SAM in MPSG format of CGE modeling. This study aims to reveal the dynamics of the following sectors with the help of CGE modeling:

- The analysis will consider the Perspective Plan (Vision 2021) of the Government as the base so that various objectives envisaged in that plan is reflected in the analysis.

- Achieving the target GDP growth rate of 8 per cent within 2015 and 10 per cent within 2021.

- Ensuring food security while supporting the agriculture.

- Employment generation by expanding manufacturing activities.

- Enhancing export earning, remittance earning, import revenue, FDI, through appropriate policies.

- Augmenting public and private investment for sustainable and pro-poor growth.

- Reducing income inequality with growth.

Methodology

As the objective suggested, the model will be developed in dynamic CGE format. The new MPSG version will be adopted for the model. A team guided by a national expert is working with the model. The Social Accounting Matrix, which is the base of the analysis, has been adopted in 27 by 27 matrix form. To build the dynamic model, the team is going through trial and error. This CGE model will be a milestone for the researchers for coming researches. The following procedures are aim to be done under the study:

- Adapting standard SAM to MPSGE form (use either country model if available or use FAO provided model as a basis);

- Selecting the elasticities and other parameters (either own estimation or borrowing);

- Plug the SAM into the model;

- Selecting the policy issues and reflect those in the model;

- Running the model, perform simulation and sensitivity analysis (Matching the theoretical aspect with the analytical framework);

- Interpretation of results with logical explanation of the issues;

- Proposing policy measures (Consistent with the model);

- Illustrating the limitation of the model.

Policy Implications

This study will be significantly influential for the policy makers as it will clearly show the pros and cons of decisions and there results for Bangladesh Economy. The results which will be obtained from the model will shed light on the issues of government's tax policies, external sector policies, subsidies and inflation issues. These are very important for the policy makers to design beneficial policies for the nation.

Name of Study: An Inquiry into the Nature and Causes of Delinking of Local Wholesale Prices with International Prices: The Case of Rice Market in Bangladesh.

Research Team: Minhaj Mahmud, Research Fellow, and Syed Naimul Wadood.

Sponsor: South Asia Network of Economic Research Institutes (SANEI).

Budget: Tk. 0.7 million.

Time Frame: January 2011-December 2011.

Rationale and Objectives

The extraordinary price surge in global food grain market has eased to some extent in the recent times. However, domestic food prices in South Asian countries have sharply increased at the same time. It has been observed, for example, that wheat prices have increased by 24 per cent in Lahore, Pakistan and by 14 per cent in Mumbai, India in early 2010. Likewise rice prices have increased by 27 per cent in Dhaka, Bangladesh between October 2009 and February 2010. On the other hand, rice prices in the international

market have decreased during the same period; prices have decreased by 6 per cent between February and March 2010 due to increased supply from Vietnam and Thailand.

This divergence of local and international prices is somewhat surprising, given the presumption that prices of tradable goods of small open economies be supposed to be set in between their respective export parity prices and import parity prices. Therefore the domestic prices should adjust close to their import parity price levels at least after a brief time period required to transport the goods from abroad. In the case of rice market in Bangladesh, we observe that local prices are actually increasing while the international prices are falling even after allowing for some time for adjustment. The point to note is that local prices are apparently not being dictated by the import parity prices, when the latter is exhibiting declining trends. Thus the price data is indicating some *delinking* that is taking place between the local prices (increasing trends) and the international prices (decreasing trends), at least for the present time period.

The study investigates the *nature of competition* in the rice market by explaining incentives and behaviours of different agents in the market, particularly those of large firms operating in the middle of the rice market supply chain. Unless the incentives and behaviours of agents at different stages are closely examined, it would not be convincing to conclude about the state of *competitiveness* of the market. It is imperative that one examines the agents operating at different stages, their incentives and sets of strategies and actions, scopes for cooperation or noncooperation among these agents, horizontally or vertically, before one can conclude about the state of *competitiveness* of a market, and as for the case here, the rice market in Bangladesh. This is precisely the point in the literature that is mostly missing. This study, therefore, would focus exclusively on this aspect. The present study investigates the following two key questions:

1. What is the relationship between the international prices and local wholesale prices of rice? In particular, it will be investigated if local wholesale price adjusts the same way when international prices increase as when international prices decrease. If not, what could be the explanation?

2. Is the domestic rice market in Bangladesh competitive? Whether there is any explicit

or tacit collusion or interdependent oligopoly type behaviour observed in the market.

Methodology

The first objective will be explored through conducting field visits to major rice trading centres of Bangladesh (major supply points, i.e., Dinajpur, Naogaon, Bogra, Kushtia and Jessore and major urban destinations i.e., Chittagong and Dhaka) by employing comprehensive questionnaires and key informant interviews (KII). Since the goal is to obtain an overall idea of the domestic market, the survey plan would include growers (the very first node of the supply chain), millers, rice aratdars (brokers, also known as commission agents), rice wholesalers and retailers (the last point of the chain from whom consumers buy rice). Moreover, key community persons of selected villages and key informants of surveyed markets were interviewed to gather details of rice trading in their respective areas/markets. The survey instruments would focus on various firm- and market specific information, particularly details of pricing decisions and bargaining, employing open ended questions for the large part. Hence, the primary data will mostly utilise qualitative assessment.

The second objective i.e. to examine relationship and adjustment process between domestic and international rice prices will be explored using secondary data on prices, production, availability, public and private import price and quantity data, government food grain storage data, government procurement data, etc. We will examine trends and volatility of rice production, imports and prices using time series estimation techniques such as descriptive analysis, unit root tests, co-integration tests and time series estimation techniques of examining volatility.

Policy Implications

Food grains, especially rice, is a major staple of the Bangladesh diet. Rice thus is an important component of the overall food security issue. Despite obstacles of increasing population and incessantly reduced average farm size and natural calamities, the rice markets grew significantly due to increasing involvement of the private sector in the last few decades. However, sudden price surges and disparity with international prices raise questions on the efficiency of the market. Hence, it is imperative to study the competitiveness of the

domestic rice market in Bangladesh and establish a relationship between international and domestic wholesale prices of rice in order to enable more efficient rice market in the country.

Name of Study: Capital Market and Resource Mobilisation in the Corporate Sector of Bangladesh

Research Team: Mustafa K. Mujeri, Director General, Siban Shahana, Research Associate, Tahreen Tahrima Chowdhury, Research Associate and researchers from Bangladesh Bank including Mohammad Jahangir, Deputy General Manager, Habibur Rahman, Deputy General Manager, Sheikh Md. Nurul Islam, Joint Director, Mahmud Salahuddin Naser, Joint Director and Anwar Aftab Ahmed, Joint Director

Sponsor: Joint Research under BIDS-Bangladesh Bank Cooperation Program

Budget: Tk. 1.85 million

Time Frame: October 2011- June 2012

Rationale and Objectives

In a developing country like Bangladesh, one of the important constraints on the investment behaviour of a firm in the corporate sector is its financial structure in the context of imperfections in the capital market. The need for and the design of public regulations to direct investment according to national priorities, therefore, depend on the structure of the financial market. Prior to the development of the capital market, own saving was the most important component of gross resource mobilisation by the private corporate sector and reliance on external resources was limited. The role of the stock market, for instance, was extremely limited. Risk, uncertainty, low returns and low capital appreciation discouraged existing companies from floating fresh issues. The scenario has been changing, though slowly, since the 1990s. As private sector has been expanding production, the need for more funds is also growing, along with the importance of external sources of funds.

The present study will closely look into the financial behaviour of the country's corporate sector and its impact on the investment pattern in the industry sector in the light of financial deepening and stock market boom in the country. In investigating the capital structure of the corporate sector, the study will consider its unique features, such as the low degree of firm participation in the organised securities market and the high dependence on bank borrowing

and/or on informal financial transactions, or quasi self-financing. The debt ratio of the listed firms and non-listed firms will be examined. The financial benefit of the firms participating in the organised securities market will also be examined along with correlation of debt ratio and concentration of shares.

A major factor underlying the Asian financial crisis of 1997 has been the vulnerability of high debt financing. It was suggested that the fund-raising behaviour of the corporate sector should be diversified through the capital market by using equity financing or issuing bonds. In Bangladesh, firms face restrictions and limitations in accessing the capital market, which is especially relevant for the non-listed companies. Some firms are also reluctant. One needs to recognise that corporate debt and equity markets work for firms only if there is an organised capital market and the firms participate in it.

It is observed that enterprises in Bangladesh are mostly dependent on bank borrowing to raise funds for working capital. Such excessive dependence increases the risk of capital investment. One reason for this is the absence of a well functioning capital market, as a result of which it has not emerged as a significant source of fund raising in Bangladesh. In the absence of alternative sources, informal fund-raising from non-market channels, e.g. owners, managers, affiliated firms, and subsidiaries also plays an important role. This calls for appropriate actions to develop different sources of capital to meet the investment needs of the corporate sector. For devising effective strategies, one needs to analyse relevant characteristics, e.g. debt ratios of the listed and non-listed companies, access to the securities market, and the scope of bond issuance by the enterprises as a way of long-term financing compared with bank borrowing. Both quantitative and comparative analyses of the issues are required to suggest effective policy measures. More specifically, the major objectives of the study will be to:

- Sketch the current pattern of resource mobilisation in the corporate sector in Bangladesh including the composition of funds raised from different sources and the effect of size of firms and their nature of activity on their relative strength in tapping resources from different sources;

- Examine the emerging debt-equity scenario, effect on the capital structure, implications on cost of capital, and other relevant issues;

- Investigate into the imperfections in the capital market especially those which hinder the promotion of a broad-based equity culture in the country's corporate sector and hence constrain capital formation and faster growth in all sectors of the economy;

- Review the current initiatives and suggest an agenda for action for facilitating the development of a sound and vibrant capital market which is essential to meet the requirements of the corporate sector especially for long term capital investment and asset creation.

Methodology

The Research Team will adopt appropriate quantitative and qualitative techniques to analyse the data necessary to address the research questions. In appropriate cases, statistical methods will be employed to test relevant hypotheses and draw robust conclusions. Both primary and secondary sources of data will be used. Primary data will be collected mostly from corporate enterprises (both listed and unlisted) using pre-designed questionnaire format. The collected information will be supplemented by information from secondary sources including relevant Bangladesh Bank documents, corporate annual reports, interviews with concerned stakeholders, and other sources.

Policy Implications

In the presence of a bank-dominated financial system where the dependence on bank loan is substantial, Bangladesh's capital market is small and has a heterogeneous composition compared with developed and well-functioning capital markets. As a result, debt market has played a minor role in investment financing even in recent years. Although the securities market has shown notable progress in recent years, it has been showing undue volatility due to many factors including the absence of a developed secondary bond market. In view of the increased emphasis on the private sector for stimulating investment and growth, the study will explore the current status of the capital market and the nature and characteristics of resource mobilisation of the corporate sector in order to draw lessons and suggest policies for developing a liberalised, market-based, and effectively

supervised and regulated capital market in Bangladesh.

Name of Study: Foreign Direct Investment in Bangladesh: Issues in Policy, Institution and Structural Reforms

Research Team: Mustafa K. Mujeri, Director General, Narayan Chandra Nath, Research Fellow, Siban Shahana, Research Associate and researchers from Bangladesh Bank **Sponsor:** Joint Research under BIDS-Bangladesh Bank Cooperation Program

Budget: Tk. 1.85 million

Time Frame: October 2011- June 2012

Rationale and Objectives

In step with most developing countries of East Asia and Latin America, South Asian countries opened up their trade and investment regimes during the early 1990s. Current account convertibility now exists in India, Pakistan, Bangladesh, Nepal and Sri Lanka. Although capital accounts remain non-convertible, many capital account transactions have been liberalised in varying degrees in each of these countries with the explicit objective of attracting foreign investment.

In Bangladesh, trade and exchange liberalisation, current account convertibility, and liberalisation of the investment regime helped raise inflow of FDI significantly during 1990s in contrast to the trickle of FDI inflow during the 1980s.The opening up of infrastructure and services to the private sector–both domestic and foreign–provided the biggest impetus to FDI inflow in Bangladesh.

FDI generates economic benefits to the recipient country through positive impacts on the real economy resulting from physical capital formation, transfer of technology, and increased domestic competition. Bangladesh succeeded in attracting significant amount of foreign investment in energy and telecom sector. Apart from facilitating the exploration and development of natural gas reserves, these investments helped raise the country's power generation capacity while investment in telecom industry had very substantial linkage effects through lowering of costs due to improved communications.

However, Bangladesh trails far behind its neighbours India, Pakistan and Sri Lanka as well as emerging markets in Asia such as Cambodia and Vietnam in terms of the volume of FDI inflow. Some of the major policy incentives for FDI relate to approval requirements, equity

participation limit and repatriation of profits, income and capital gains. Bangladesh now has one of the most liberal investment regimes. No approval is needed for foreign investment and there is no limit on foreign equity or repatriation. But as Bangladesh experience has shown, liberalisation for providing incentive to foreign investors is a necessary but not sufficient condition for robust FDI growth. In ultimate analysis, it is relative risk and opportunity for high returns that guide investor interest, which in turn depend on a host of policy, institutions and structural factors.

The purpose of the present study is to delineate these multi-dimensional factors affecting FDI inflow into Bangladesh, assess their role in influencing the past FDI inflow, and suggest a strategic approach for attending these factors for attracting FDI into Bangladesh.

The study will have the following four broad objectives:

- To assess the nature and the magnitude of past FDI inflow into Bangladesh;
- To assess the impact of past FDI inflow on the economy in terms of employment, wages, liberalisation standards, skill development, technology transfer, export, revenue, balance of payments, etc.;
- To identify the factors that have facilitated the growth of past FDI inflow and the constraints that have held back the realisation of Bangladesh's full potential for FDI inflow; and
- To suggest a strategic approach to addressing the policy, institutional and structural factors influencing FDI inflow and its impact on Bangladesh economy.

Methodology

The study will mainly involve desk-based research using secondary data. This will be supplemented by a perception survey covering a sample of foreign investors and other stakeholders to identify major determinants influencing FDI inflow into Bangladesh. The data collected will be analysed using standard statistical tools of bi-variate and multi-variate analysis.

Policy Implications

The study would help in revealing the impact of FDI on Bangladesh economy, delineating the factors affecting FDI inflow into the country and in working out an alternative strategic policy blueprint for attracting FDI into Bangladesh.

Name of Study: Developing a Comprehensive Trade Policy for Bangladesh

Research Team: Nazneen Ahmed, Senior Research Fellow

Sponsor: KATALYST

Budget: Tk. 2.0 million

Time Frame: November 2010- September 2011

Rationale and Objectives

Trade-led development is increasingly becoming the mainstay of development strategies of Bangladesh- about 43.4 per cent of the country's GDP is currently related with international trade. Since the early 1980s, the trade regime of the country has been directed under structured policies for import and export, and these policies have contributed to opening up domestic market and ease the export to international market. At present export and import-related two policies are in the cabinet for approval; these include, the draft *Import Policy Order 2009-2012* and the draft *Export Policy Order 2009-2012*. However, various stakeholders particularly policy makers, trade bodies, think tanks and academia are increasingly felt need of a comprehensive trade policy in view of meeting the long term needs of

trade-led sustainable development of the country.

The need for a comprehensive trade policy can be justified in many accounts; a number of those have been discussed below:

- The proposed comprehensive trade policy would set out strategies towards attaining various targets set forth under the medium and long term development plans of the country.

- There are strong debates over consistency between the objectives and strategies specified in the trade policy and various measures taken under government's budgetary framework. There should be a comprehensive trade policy under which a more realistic tariff rationalisation programme could be undertaken keeping in view a long term vision regarding international trade liberalisation.

- In view of the gradual rise of inter-linkage between trade, investment and industry, an analytical framework should be developed to ensure coherence of monetary, fiscal and industrial policies.

- There are overlapping interests of manufacturers, exporters and importers regarding policies related to exports. Under a comprehensive trade policy, policies related to export-oriented industries need to be integrated, and the interests of import-substituting industries should be provided with adequate focus.

- Capacity building for policy makers on international trade issues is important for efficient formulation of trade policies and reaping strong benefits from international trade. A comprehensive trade policy will provide necessary policy direction regarding building capacity at public and private sector.

The study on framework for the comprehensive trade policy of Bangladesh will cover the following issues:

- Identify gaps of existing export and import policies in order to appreciate the nature and extent of constraints and limitations of these policies in pursuing medium and long term targets set forth for enhancing trade;

- Identify gaps as regards coherence of various policies related to monetary, fiscal, industry, FDI and trade, which will be necessary for enhancing export, import, production and investment;

- Identify issues and concerns related to trade and investment linkages at bilateral, regional and multilateral levels in the coming decades in order to make accommodate relevant strategies under the comprehensive trade policy;

- Identify the areas of needs of capacity building and capacity utilisation in the public sector as well as in the private sector in view of strengthening domestic capacity for informed negotiation and policy making;

- Identify the mechanism for tracking, measuring and evaluating implementation of stipulated policy in order to achieve targeted level of growth of trade flow, development of capacity of public and private institutions, and strengthened integration between industry, trade and investment.

Methodology

Though this study will be administered by the Centre for Policy Dialogue, BIDS researcher Dr. Nazneen Ahmed is a co-researcher in this study. The study will be based on information collected from secondary sources and a series of consultation with stakeholders. Based on the available information, a quantitative analysis will be carried out to set sector-specific targets for the next decade particularly related to production, trade, investment, employment.

Analysis based on secondary information related to existing policies in Bangladesh will identify gaps in different policies, identify issues related to the development of the domestic market-oriented, import-substituting industries, particularly policy related issues, and assess the implications of various trade and investment agreements to be enforced at bilateral, regional and multilateral levels in the coming decades.

Consultation with stakeholders will include face to face interviews, inception seminar and a national consultation seminar. Face to face interviews will be conducted with relevant experts from the government, trade bodies, bankers, think tanks, research organisations, and leading personnel of the corporate sector. These consultations will explore experts' opinions on a possible framework for trade policy for Bangladesh.

Policy Implications

The output itself will serve as a policy for the government. In view of the gradual rise of inter-linkage between trade, investment and industry, this policy will be helpful to bring coherence among existing export, import and industrial policies. Thus this will help proper formulation of monetary and investment policies to stimulate trade and industrialisation.

Name of Study: Trade Pattern and Trade Policy in Bangladesh

Research Team: Monzur Hossain, Research Fellow and Narayan Chandra Nath, Research Fellow

Sponsor: International Food Policy Research Institute (IFPRI)

Budget: Tk. 1.4 million

Time Frame: July 2011- February 2012

Rationale and Objectives

Analyses of trade pattern and trade policies are important to pinpoint the areas of deficiencies of current trade and work out necessary corrective

measures for desirable changes in the trade pattern and trade development. This kind of study has not been conducted with rigor in the past. Necessity of this study has arisen to respond to the changing needs of post-global meltdown. It is also important in the context of evolving opportunities of increasing global and regional integration and changes in the demand structure of the country.

The specific objectives are to:

- Analyse evolving market and trade opportunities in the region and the world that can enhance development in Bangladesh;

- Highlight the state of exports and imports of Bangladesh with their changes;

- Calculate revealed cooperative advantage(RCA)indices and market share of major exports products;

- Review present export incentive regimes for export development and study the impact of studies;

- Calculate systematic comparison of effective rate of protection(ERP) at international level and regional level(SAARC) or at the level of same category of countries;

- Analyse the trade problem related to food security;

- Address the issue of rationalisation of tariff structure and non-tariff measures;

- Identify the direction towards which policy challenges and changes can emerge for facilitation of trade in Bangladesh.

Methodology

With a view to assessing the current state of trade in Bangladesh some conventional trade related indices like RCA, ERP and Herfindahl-Hirschman concentration ratio will be estimated.

Exploring evolving market and opportunities

In this stage, Balassa's RCA (Revealed Comparative Advantage) indices for different products and markets will be estimated with conventional formula.

State of trade and trade policies

In this step, change in the volume and composition of trade, spatial distribution of trade, concentration of imports and exports, trade liberalisation policies and incentive

structure will be overviewed to assess the state of trade.

Role of incentives and rate of protection

Effective rate of protection (ERP) will be calculated. Nominal and effective rates of protection will be estimated and export demand function will be assessed to analyse impact of policy incentives.

Policy Implications

The analysis will provide inputs to understand the changing pattern of trade regimes in the country and help identify the opportunities and policies that would create a more facilitating trade regime for Bangladesh.

Broad Theme: *Energy Issues*

Name of Study: Productivity and Efficiency of Solar House Panels in Bangladesh: Economic, Social and Food Security Implications

Research Team: M Asaduzzaman, Research Director, KAS Murshid, Research Director, Mohammad Yunus, Senior Research Fellow and Syed Saad Andalib, Research Associate

Sponsor: World Bank

Budget: US$ 120,000

Time Frame: September 2011-June 2012

Rationale and Objectives

The general lack of access to electricity imposes limits on the prospects of growth and increased welfare. The positive relationship between electrification and growth is well-known in the literature and has also been investigated in the Bangladesh context. It is also generally well-known that access to electricity raises household welfare in several ways. Furthermore, it should be kept in mind that access to electricity itself is a major indicator of progress in achievement of the MDGs. The continued rise in the access to electricity therefore should be a major development target on counts of growth, increased welfare and quality of life as well as achieving MDGs. The question is if the rate of growth in generation of electricity is slow, and pace the of rural electrification and its quality is lackluster, what may be the way out. Herein lies the importance of the solar home system.

Sunlight combines two types of energy, light and heat. Both may be utilised directly or indirectly by converting them into electricity which may then be supplied to entities such as households or firms to be utilised as they see fit. Bangladesh being a tropical country receives bright

sunshine throughout the year and the potentials for use of solar energy have been deemed to be very substantial. Not just that, there are also ideas that the solar electricity may actually be supplied through the normal grid. The engineering details of the direct and indirect use of solar energy will be discussed at a later stage. For the time being it may simply be noted that one particular technology, solar photovoltaic, has become popular the world over for providing electricity to households and enterprises in remote and off-grid areas. Bangladesh is no exception.

The study will assess the impact of the solar home system spanning from the benefits of extended lighting to reduced indoor air pollution and gauge the size of the potential market for solar home and efficiency of service delivery mechanism of the partner organisations of the IDCOL.

Methodology

Since no baseline data are available for the adoption of the SHS in Bangladesh, the three contending non-experimental methods available for its impact evaluation include instrumental variables (IV), regression discontinuity design (RDD), and propensity score matching (PSM) methods. It may be noted that program placement, the choice of villages, is endogenous in that the treated villages must be off the grid in order for the POS to sell a particular system and receive refinancing and subsidy from the IDCOL. However, once a PO or a number of them are located in a particular location, all of the households are eligible to purchase a SHS if they wish so.

It may be noted that the POs are responsible for designing and delivering various packages of the SHS. To determine the extent to which the SHS program is being implemented according to plan and to assess and document the degree of variability in program implementation by the POs in order to understand the relationship between program context (i.e., setting characteristics) and program processes (i.e., levels of implementation). This evaluation will provide accountability of IDCOL and the POs to donors and the government. Unlike the outcome evaluation that would be invoked in assessing the impacts on the households, process evaluation verifies what the program is and whether it is being implemented as designed based on empirical data. To that end, four categories of process evaluation questions will be asked in this exercise.

1. Issues at the PO Level: What proportion of those who might purchase the SHS from that particular PO actually purchased it? Has the PO served the intended clients? What were the socioeconomic and demographic characteristics of clients? What were the characteristics of those who dropped out?

2. Treatment Process at the PO Level: By what route did clients purchase SHS from the vendor? What actually happened to clients in delivery of services and was that intended?

3. Issues at the Region/System Level: How many SHS vendors exist in the region? How many clients are served by each PO in a year? Are there differences in the types of clients served at each PO?

4. Treatment Process at the Region/System Level: Are different POs aware of one another? Is their interaction best characterised through cooperative or non-cooperative game-theoretic framework?

In addition to that some of the households do not purchase the packages on offer at the current pricing structure. It may be assumed that some of the households would never purchase SHS at any positive price level. But this is a very strong assumption. It is highly likely that more and more of the hitherto unwilling households would purchase SHS as the offer price for a package decreases. This proposition can be tested by appealing to the Willingness to Pay Principle (WTP). Thus, the size of the market in a village would be the cumulative total of users and aspirants at different price level. However, SHS is a distant inferior substitute of grid electricity. Thus, the potential locations of SHS are those localities (be they are regions or villages) that are unlikely to be electrified in near future. The size of the market would be the number of such localities (to be collected from the REB) times the cumulative number of users at different price levels.

Policy Implications

Subject to the performance of the SHS based on the various criteria, its further potentials need to be known with some kind of certainty. A market survey to assess the future potentials needs to take into account not simply the theoretical limits, but also practical factors such as growth in income of households, the need for higher levels of energy that may be demanded over time and also the expansion of the normal rural electrification system in the country. Once done, such an assessment will

guide to the investment needs and associated supplementary activities.

Broad Theme: *Climate Change Impacts*

Name of Study: Food Security and Mitigation in Bangladesh Agriculture: Searching for a Low Carbon Path of Development (Carbon Footprint of Bangladesh Agriculture)

Research Team: M Asaduzzaman, Research Director, Minhaj Uddin Mahmud, Research Fellow, and Mitali Parvin, Research Associate

Sponsor: Bangladesh Climate Change Strategy and Action Plan (BCCSAP)

Budget: US$ 20,000

Time Frame: July 2011-September 2011

Rationale and Objectives

Bangladesh agriculture has come a long way over the last quarter of the last century. Its share, though not the absolute contribution, in the GDP has drastically fallen. While population has roughly doubled, it has been credited with ensuring food security by and large, from domestic production, and continuing to employ the largest share of the liberalisation force (around 50%). At the same time, it's structure has changed substantially due to technological change and economic imperatives. It has become more energy-intensive and more market-oriented. These also mean that it has become more green house gas (GHG) emission-intensive than before.

Given the present preoccupation of the whole world with the anthropogenic origin, process and impacts of global climate change, attention has focused, among others, on agriculture to understand how it is impacted by climate change mainly due to concerns regarding the threat to food security and livelihood of people, particularly in poorer countries and regions of the world. Increasingly, however, it has also become apparent that agriculture is also a major source of GHG emission. While energy supply, transport and industry account for the bulk of it, the share of agriculture in GHG emission equivalents, taking into account the global warming potentials of gases such as methane and nitrous oxide which are emitted during agricultural production processes is rather significant at 13.5% or so as stated in the 4th assessment report (AR4) of IPCC. The question is how to reduce that emission without compromising food and livelihood security of people. The present research study within the overall framework of current CGIAR

initiative for research on Climate Change, Agriculture and Food Security (CCAFS) shall make an attempt to understand these broad issues within the context of Bangladesh.

There are several national and global imperatives behind the present research initiative. From the national perspective, it may be noted that Bangladesh has a very large population of around 160 million and growing at 1.5% or thereabout while the net cultivated area is shrinking (roughly at 1% per annum) due to ever-increasing non-agricultural demand. That means the productivity of land has to rise fast. A recent study estimates that the demand for food may rise at the rate of 3.2-3.3 per cent per year. What Bangladesh farmers did in this situation had been to switch massively to mechanically irrigated rice production with the help of rising application of fertiliser as well as moving from bullock tillage to mechanised tillage. The result had been a large scale shift to energy-intensive agronomic and processing practices and consequently rising emission of carbon and other GHGs (methane, nitrous oxide) from agriculture in general and rice production in particular.

Furthermore, while much of rice used to be consumed within the farm households and households nearby, it is now marketed to far flung areas. That means again the use of energy-intensive transports than had been the case previously. Overall thus, between the planting, growing and harvesting of paddy to purchase of the rice by the consumer, energy has been used at many stages and at much higher intensity than before. Add to this the case of irrigated and heavily fertilized rice production system (and rather unbalanced towards the use of nitrogenous fertiliser) which gives rise to emission of methane and nitrous oxides which have much stronger global warming potential than carbon di-oxide.

All these would not have mattered, but for two reasons. First, the irrigation and fertiliaation practices themselves are rather quite inefficient and much more water and fertiliser are applied than are necessary which indicates overall energy inefficiency as well as greater emission than is absolutely necessary. So raising energy efficiency in itself and thus lowering emission have the benefits of having the same output at lower cost while brightening the chance of acquiring credits in a carbon market. A relevant issue here is that of subsidy.

Secondly, while least developed countries (LDCs) such as Bangladesh had been exempt from mitigation under the UNFCCC rules,

since COP 13 in Bali, LDCs are required to lower emission either on a mandatory or voluntary basis. The recent mood in climate change negotiations indicates that no matter what a country's situation is, all are expected to undertake Nationally Appropriate Mitigation Actions (NAMA) which may be measured, reported and verified (MRVed) yet to be determined by global bodies. Hence, the imperative is there for lowering energy (and in case of agriculture energy, water and fertiliser) use by raising efficiency and thus cutting down on GHG emission. One therefore has to understand clearly how and where and at what stage of production and post-harvest operations how much emission takes place, directly and indirectly. This will allow the policy makers to judge the type and form of intervention that may be necessary for lowering emission.

The broad objective of the present study is to ensure low carbon development without compromising food, livelihood, water and energy security of people as stated in the Bali Action Plan submitted by Bangladesh to the United Nations Framework Convention on Climate Change (UNFCCC) and later enshrined in the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009 as the basic principles behind all climate change management activities by the Government. The outcome of the proposed research is a set of recommendations for formulation and implementation of appropriate policies for agricultural growth within a low carbon development framework of the BCCSAP.

Methodology

Several methods of analytical investigation may be employed depending upon situation. In any case, several of them may be employed including the IPCC's method of GHG emission estimation, Life Cycle Analysis, Input-Output Analysis, and FAO's Ex-Act method. Among these the IPCC-based estimates may be available from secondary source such as national communication of Bangladesh while others have to be estimated. A recently prepared Input-Output table may be available but may have to be modified to suit the present purpose.

Life Cycle Analysis (LCA) has four broad steps, viz., goal definition and scoping, second, inventory analysis, third, impact assessment and finally, interpretation. The goal definition and scoping involves defining the objective of the study and defining the system boundaries for environmental information. Inventory analysis provides the actual

materials and resource flows which ultimately translate into the emission of GHGs. In the literature, the life cycle inventories are sometimes called either attributory which tells us how are things while the consequential signifies how things (flows) will change consequent upon policy decisions. In fact, the two approaches are complimentary to each other. Impact analysis tells us how the inventories of the material flows and emissions are going to impact upon the environment in specific manner if the inventory leads us to believe that there are major resource flows within the system boundaries. Finally, interpretation allows us to judge the consistency of the results, their completeness or otherwise and the limitations and subject to such caveats the significance of the core results for policy. In this exercise, the main concern is the inventory analysis and their global warming potentials.

Policy Implications

The estimates and analysis of emission of GHGs from crops on a life cycle basis have important policy implications. There are several stages in their life cycles from which carbon di-oxide emission takes place. For rice, for instance, by and large, it is irrigation and water management, fertilisation and paddy parboiling. Tillage is also a major area. However, the nature of emission is quite different in these stages. Given these differences, the nature of mitigation may also differ. One particular issue is to point out the trade-offs as well as synergy such mitigation measures may have or how some of them may actually also be intertwined with adaptation.

Name of Study: Planning for Pro-Poor Sustainable Development in Bangladesh: Climate Sensitive Public Investment in Selected Sectors

Research Team: M. Asaduzzaman, Research Director, Zaid Bakht, Research Director, Pratima Paul Majumder, Senior Research Fellow, K M Nabiul Islam, Senior Research Fellow, Kazi Ali Toufique, Senior Research Fellow, Zulfiqar Ali, Senior Research Fellow, Minhaj Mahmud, Research Fellow, Tahreen Tahrima Chowdhury, Research Associate and A K Enamul Haque, American International University.

Sponsor: United Nations Development Programme **(**UNDP)

Budget: Tk. million

Time Frame: July 2011- December 2011

Rationale and Objectives

Integrating climate change issues in a country's development process is essential for sustainable development. Employment, income and consumption are three essential socio-economic outcomes of development. The main factor behind development is investment for production and human resource development. The two main development concerns in the context of climate change are how the outcome of development are impacted by it and development itself impacts upon climate change. The root cause behind climate change is emission of green house gases (GHG).These emissions take place during the process of consumption and production of goods and services.

Three climate variables are selected for the study: temperature, rainfall, and sea level rise. Four sectors are selected for reviewing the ADP: agriculture, water resources, rural development and institutions, and transport. The study focuses on how climate variables affect different projects under ADP. Any particular variable can affect different projects of the same sectors. Each variable has immediate physical impact on different projects of each sector. The specific objectives are:

- Recommending a process of integrating development planning process with climate change concerns;

- Reviewing ADP planning process to recommend how pro-poor climate and environmental issues can be included in its approval process;

- Recommending how selected projects can be modified for adaptation needs and mitigation potentials;

- Suggesting revisions to DPP format and preparing guideline with a set of indicators ensuring poverty reduction, sustainable environment, climate change adaptation and mitigation (where applicable) and disaster risk reduction.

Methodology

Initial desk review and selection of case projects

This includes conducting desk review of DPP to examine:

-if climate variability on the project is taken into account or not

-how climate variability affect activities and outcome of project

-if any feasibility study has been carried out to address such concerns and how the study has proposed

Selection of case projects

Sample of case projects given by the sponsors will be categorised based on criteria:

-Spatial balancing

-Climate change aspect

-Manifestations

Stakeholders' consultations/interview

The purpose is to draw views from different group of stakeholders in the selected project sides and also at national level.

Field visit

The study team will conduct field visits to selected sites and carry out GD/FGD.

Review of the case projects including DPP format

The team will have a critical review of the selected project on the extent to which the climate change issues are reflected in the selected project; how the selected project integrate climate change issues to reduce risks and to increase the effectiveness of the project.

Policy Implications

An attempt will be made to find out the nature of the physical impact of these variables along with adaptation mechanisms. Moreover, these adaptations may also have some effect on biodiversity and socio-economic aspect. For instance, we want to observe how rainfall may affect water resources. Flood may affect flood embankments, drainage system. Next step needs the elaboration of adaptation process of how these project can overcome these difficulties. Then comes the question whether the adaptations process may affect eco-system, socio-economical life that should be interrelated with gender issue, employment and poverty alleviation.

Name of Study: Gender Dimensions of Climate Change Adaptation in Bangladesh

Research Team: S.M. Zulfiqar Ali, Senior Research Fellow, M Asaduzzaman, Research Director, Nehraz Mahmud, Research Associate, Iqbal Hossain, Research Associate and Iqbal Alam Khan, external collaborator

Sponsor: World Bank

Budget: Tk. 8.7 million

Time Frame: July 2009-December 2011

Broad Theme:
Population Studies and Social Protection

Name of Study: Post Enumeration Check (PEC) for the Population and Housing Census 2011

Research Team: M. A. Mannan, Senior Research Fellow, M. Sohail,

Research Fellow, Durga Pada Bhattacharjee, External Consultant and Mustafa K. Mujeri.

Sponsor: Bangladesh Bureau of Statistics (BBS)

Budget: Tk. 1.9 million

Time Frame: April 2011-October 2011

Rationale and Objectives

Errors are inevitable in a large data collection exercise such as census. Errors in census can arise from many sources such as flawed data collection and processing procedures. There are a number of methods used to evaluate censuses including: demographic analysis; record checks and comparison of census data with results of existing household surveys, and Post Enumeration Surveys. Population and Housing Census of Bangladesh has been conducted during 15-19 March 2011 and it has been decided by the government to conduct the Post Enumeration Check (PEC) survey independently within one month of conducting the main census.

Independence between the PEC and the census is a prime requirement for the dual system of estimation. The validity of the PEC estimates hinges on the assumption of independence between the census and PEC. Independence between the two operations (i.e. census and PEC) should be attained by maintaining operational procedure.

In view of the above, the BIDS has been given the technical responsibility of conducting the PEC for an independent evaluation of the quality and coverage of the main census.

What is PEC?

According to the United Nations Principles and Recommendations for Population and Housing Census Rev. 2 (UN 2008), a PEC is a complete re-enumeration of a representative sample of a census population followed by matching each individual enumerated in the PEC with information obtained from the census enumeration. The results of the comparison are mainly used to measure coverage and content error.

Coverage error refers to either an undercount or overcount of units owing to omissions of persons/housing units or duplication/erroneous inclusion, respectively. *Content error* pertains to the error in the characteristics that are reported for the persons or housing units that are enumerated. Both types of error can affect the distribution of the population with respect to their characteristics.

There are three types of coverage error:

a) Omissions
b) Duplications, and
c) Erroneous inclusions

These errors can also occur in the recorded characteristics with respect to enumerated persons such as age, family relations, marital status, etc. While coverage error refers to housing units and people missed in the census or those erroneously included, on the other hand, content errors evaluate the response quality of selected questions in a census, which are also a basis for evaluating reliability of some characteristics reported in the census (such as age, sex, education and occupation of household members).

It needs to be emphasised here that the PEC can only generate reliable and accurate results if the sample is well-designed, its implementation is efficiently managed, the matching operation is meticulously done and the data analysis and estimations are correctly executed.

While a number of methods have been developed to evaluate census data, for many developing countries the PEC seems to be the most ideal owing to paucity of appropriate data to facilitate the effective use of other methods. A PEC is an independent survey that replicates a census. The survey and the census results are then compared (matched). The results of the comparison are used to measure the coverage and content errors of the census. Estimates of net coverage, the number of people omitted in the census, the number erroneously enumerated and content error rates for specific questions are typical products of a PEC.

The primary objective of the PEC is to determine sources and magnitude of coverage error and content error. The specific objectives are: (a) to measure under coverage and over to coverage, and (b) to measure levels of agreement for responses to questions on selected characteristics, such as sex, age, marital status, education of household members, sources of drinking water, and type of toilet facilities.

Methodology

Issues in Methodology

In general, Post Enumeration Checks (PECs) involve: (i) re-enumerating designated sample segments or Enumeration Areas (EAs), and (ii) re-enumerating the persons in a sample of previously enumerated households.

Sample size

For the Census of 2011, the country was divided into 3, 10,000

Enumeration Areas (EAs). All rural mouzas (villages) and all urban mohallas, having on the average 120 households, were defined as an EA.

The number of PSUs was 255 for the PEC in 1991, which was increased to 282 for the PEC in 2001. However, the number of EAs covered for the PEC of 2011 was 280. The sample had two-way stratification design. The primary stratification was grouping of EAs by Rural, Municipality, other Urban (THQ) and City. The second stratification was based on geographic locations within each primary stratum. Within each sampling scheme, each area of the country was represented in proportion to population size. Urban- rural breakdown of EAs for the PEC of 2011 was as follows:

Area	No. of EAs to be
Rural areas	140
Municipality/Urban	60
Other urban	20
City corporations	60

This sample size of 280 EAs (i.e. 33,600 households) is large enough to provide estimates of census coverage at the national (including rural-urban) level with reasonably low sampling errors. To minimise non-sampling errors, adequate emphasis was placed on extensive training of enumerators/supervisors, adequate supervision of fieldwork and developing an effective matching operation at the headquarters (at BBS).

The PEC procedure was divided into three phases. The **first phase** was the **'PEC-A field survey'** covering 280 EAs. The field work for PEC-A began on 10 April, after all census enumeration booklets have been removed from the Zonal Officers and put in storage in Parishankhyan Bhaban at the BBS office in Dhaka. The **second phase** was the **'Headquarters matching operation'.** The purpose of the Headquarters Matching Operation was to classify each person listed in the Census and PEC-A in terms of whether he/she has been correctly enumerated in the census (a matched person) or tentatively missed in the Census (a PEC person unmatched with the Census). The **third phase** consisted of **'PEC-B field follow-up operation'.** The PEC-B had two purposes. Firstly, to estimate the number of erroneously enumerated persons included in the Census and secondly, to verify that persons classified as tentatively missed in

the Census (non-matches) actually were missed.

Policy Implications

The results of PEC will be used to adjust the population estimates of Population Census 2011, which will be the basis of policy and programmes for the coming years.

Name of Study: Baseline Survey of the Vulnerable Group Development Programme

Research Team: M. A. Mannan, Senior Research Fellow, and A.T.M. Saifullah Mehedi, Research Associate

Sponsor: Department of Women Affairs (DWA), Ministry of Women and Children Affairs, GoB.

Budget: Tk. 1.5 million

Time Frame: April 2011-September 2011

Rationale and Objectives

The Vulnerable Group Development (VGD) is a multi-dimensional food aid program, which is quite different from Food for Work and Test Relief. The target group of the VGD program is mainly the destitute women. These include landless and assetless women who are widowed, divorced, abandoned, having under-nourished children, lactating mothers and women with handicapped husband, etc.

Chronic food insecurity is one of the important constraints that makes the extreme poor highly vulnerable and limits and/or negates their efforts to escape the severe forms of poverty. The link between extreme poverty and the degree of food insecurity had been the foundation on which the World Food Program in the wake of 1974 famine in Bangladesh initiated the Vulnerable Group Feeding (VGF) in 1975, which was later renamed as Vulnerable Group Development (VGD) Program.

The Vulnerable Group Development (VGD) program exclusively targets poor women and provides a monthly food ration over a period of 24 months. The concentration on mere food grain transfer, through providing two years of relief for the most vulnerable, was considered inadequate in sustaining such women at levels above poverty because of its failure to address the systemic basis of poverty and gender inequality. Hence, since the early 1980s, there has been a progressive reorientation in the Program from providing relief, to supporting development. In 1987, the government and the WFP transformed their existing VGF program in both name and substance. Vulnerable Group

Feeding (VGF) card holders became Vulnerable Group Development (VGD) card holders to reflect the expanded and significantly different focus of WFP relief efforts. The program was redesigned with the new objectives of "increasing the self-reliance of the most disadvantaged women." The added components of the program include savings, credit, functional education, training in income generating skills, health and nutrition as well as legal issues.

The program currently attempts to improve the economic and social situation of VGD women so that they may graduate beyond their existing conditions and be able to sustain themselves above the hardcore poverty level. More specifically, the immediate objectives of the VGD program are:

a) to increase the income earning capacities of women by: providing training in marketable skills, encouraging the accumulation of seed capital through savings, providing access to credit;

b) to increase functional knowledge, including literacy of women through training and participation in group activities;

c) to increase the food intake of women and their family members.

The main purpose of the study was to generate the initial benchmark on food insecurity and livelihood patterns of program beneficiaries for future comparison and to assess the targeting effectiveness of beneficiary selection. The overall objective of the baseline survey of VGD programme was:

(i) To generate the initial benchmark on food insecurity and livelihood of program beneficiaries for future comparison;

(ii) To prepare a profile of program participants in order to set a benchmark to track the intended changes in food security/nutritional well-being (proportion of households consuming three square meals a day), and livelihood patterns (proportion of households earning more than US $ 1/.50 per day; proportion of women involved in income generating activities, etc.) of beneficiaries after the end of the current cycle.

The selection of VGD women is done by local elected representatives (i.e.

UP chairman/member). The selection is based on three criteria: widowed or abandoned female-headed households, households owning less than 15 decimals of land and households earning less than Taka 300 per month. In the 2005–2006 VGD cycle, a new set of selection criteria was introduced. According to the "inclusion" criteria, a household should meet at least four of the following criteria, and those meeting all five will be given priority:

1. Consumes less than two full meals per day;

2. Owns no land or less than 0.15 acre of land;

3. Very poor housing conditions (construction material and sanitation facilities);

4. Extremely low and irregular family income (less than Tk 300 per month) from daily or casual liberalisation; and

5. Household headed by a woman with no adult male income earner and no other source of income.

The new criteria also included "exclusion" criteria stating that no VGD card will be provided to women in any of the following categories:

1. Not within the 18–49 age group;

2. Already member of other food and/or cash assistance programs; and

3. Were VGD cardholders at any time.

In selecting the beneficiaries, priority is given to women who:

- Are physically fit;

- Have the ability to develop their economic and social condition;

- Are interested to work in a group.

One household can only have one VGD card. The selected VGD cardholder woman should be physically and mentally sound and must be from amongst the most vulnerable and poor households in the union.

Methodology

The present research has been carried out based on a survey of 812 VGD cardholders and 280 non-beneficiaries. The survey was conducted in 7 divisions of the country. From each division, the sample locations consisted of two districts, four upazilas and four unions. The main purpose of the study was to generate the initial benchmark on food insecurity and livelihood patterns of program beneficiaries for future comparison

and to assess the targeting effectiveness of beneficiary selection.

A total of 812 beneficiaries were selected from the 28 sample unions (29 beneficiaries from each union). In order to be able to test whether the VGD women come from the poorest group (as per selection criteria), we need to have a control group. The rationale for selecting "control" households during the "benchmark" period and later on for impact survey is that the impact of the programme on beneficiary households will be better reflected if comparison of program participants is made with the control groups. The control group for the present survey was selected in such a way that the non-beneficiaries belong to similar socio-economic category as that of the program beneficiaries, but having no involvement with any safety net programme. From each selected union, 10 control households were selected which gave a total of 280 non-beneficiaries from the 28 sample unions.

Key Findings

With the exception of some minor variations, the age distribution of both the VGD beneficiaries and non-beneficiaries is similar. About 95% of the VGD beneficiaries fall under the prescribed age range of 18-49 years. About four-fifths (79.4%) of

VGD households are headed by males, while only 20.6% households are female-headed. By contrast, 57.9% of non-beneficiary households are maleheaded and the rest 42.1% are headed by females. However, even though about four-fifths of the VGD cardholders come from male-headed households, it has been observed during field visits that majority of these male heads are engaged as casual or daily liberalisation and they are equally vulnerable to food insecurity, hunger and malnutrition.

The occupational structure of household heads differs widely for the two categories of respondents. About a half of both VGD (47.2%) and non-beneficiary household heads (46.4%) are employed as daily or casual workers. The heads of non-beneficiary households (23.9%) are three times as likely as heads of beneficiary households (7.8%) to be employed as housemaid/domestic help. These are mainly female-headed households without a male earner. In the absence of an adult male, the burden of maintaining the household falls on the destitute women (widowed, divorced, separated women, or women with disabled husband). These are the households who are most vulnerable in the rural setting and they are badly

in need of help and assistance for day to day running of the family.

Monthly income is considered to be an important indicator of poverty. The average monthly income of the beneficiary households was 35% higher compared to non-beneficiary households (Tk. 3,506 vs Tk. 2606). About a quarter (23%) of beneficiary households live on a monthly income, which does not exceed Tk. 2,000. On the other hand, more than two-fifths (43.2%) of the non-beneficiary households subsist on a monthly income not exceeding Tk. 2,000. The per capita monthly income was Tk. 745.80 for VGD households compared to Tk. 631.070 for non-beneficiary households.

The housing condition shows that 13 per cent of beneficiary and 19 per cent of non-beneficiary households live in Jhupri houses with highly impermanent structure. These types of households are highly unsuitable for living. Another 43.8% of beneficiary and 59.3% of non-beneficiary households live in vulnerable housing structure. Thus, more than half (56.8%) of VGD and about four-fifths (78.5%) of non-beneficiary women live in households characterised by poor housing condition.

In terms of per capita income, asset ownership and housing conditions, the beneficiary households are somewhat better off compared to non-beneficiary households. Though a sizeable proportion of VGD households still have low income, live in poor housing conditions and possess very little productive assets, compared to non-beneficiary households their vulnerability is somewhat less acute.

The food security situation of VGD households was examined in terms of food adequacy, meal frequency, and household food expenditure patterns. The findings show that poverty and food insecurity are extremely widespread in the study areas. More than 95% of VGD households had to face some kind of food deficit during the last year preceding the survey, the corresponding figure for non-beneficiary households was even higher (99.3%). With regard to the extent of yearly food deficit, about one-third (36%) of the beneficiary households and half of (48.9%) non-beneficiary households have year round food deficit. More than half of the beneficiary households (56.3%) compared to two-thirds of non-beneficiary households (68.5%) are in chronic food deficit (having food deficit for more than 6 months annually). These are the households which are in worst condition in terms of food security.

Policy Implications

The present study will help the implementing agency to assess whether the economically most vulnerable and socially most disadvantaged households have been selected for the VGD program. The selection criteria for the VGD women specify that women from landless households or households owning less than 15 decimals (0.15acre) of land, women with irregular income (less than Taka 300 per month) or no household income, women who are daily or casual liberalisationers, and women from households lacking ownership of productive assets, be selected. Additionally, preference is given to female headed–households (widowed, divorced, separated, deserted women or women with disabled husbands).

Name of Study: Social Safety Net Program System and Management: Issues Regarding Transparency and Accountability in the Design and Implementation of Selected Programs in Bangladesh

Research Team: M. A. Mannan, Senior Research Fellow and Badrun Nessa Ahmed, Research Associate

Sponsor: Asia Foundation and USAID

Budget: Tk. 3.4 million

Time Frame:

Rationale and Objectives

Bangladesh has done remarkably well in improving its social indicators in many respects. Achievements include substantial improvement in infant and child mortality, increasing the national literacy rate, improving school attendance for girls and reducing the rate of population growth.

However, poverty is still massive in Bangladesh both in terms of absolute numbers and as proportions of total population, where a significant proportion of the population lives below the poverty line. According to the HIES 2005, around 40% of the people are estimated to be below the head count poverty level, while 25% are believed to lie in "extreme poverty." The latest estimate (BIDS 2010) shows that around 78% of the extreme poor (i.e. around 30 million population) can be categorised as hardcore poor. Chronically underfed and highly vulnerable, this segment of the population remains largely without assets (other than its own labor power), which is difficult to reach through standard development programs. Aside from low income, many households in Bangladesh suffer from vulnerability in income/welfare as a result of low human capital accumulation, illness,

seasonal unemployment, or natural disasters. Additionally, Bangladesh is prone to natural disasters and the past experience suggests that these disasters are capable of affecting everyone in the country.

The government is implementing various development activities to mitigate the sufferings of the destitute people. Social safety net program is one of them. According to the HIES 2010, 24.57 per cent of the households reported to have received benefit during the last 12 months from at least one type of program, in contrast to only 13.03 per cent in 2005. So, safety net programs have been widened substantially both in coverage and amount during the period 2005 to 2010.

It may, however, be mentioned that the benefits of development and growth do not always accrue to those who are below the poverty line. In many instances, there will continue to be large pockets of the very poor those who cannot benefit from various developmental activities initiated by the government. Therefore, the development of adequate social safety nets is an important element of the poverty reduction strategy of the government of Bangladesh.

The most startling consequence of widespread poverty in Bangladesh is

that one-fifth (17.6 per cent) of the country's population cannot afford an adequate diet, according to the 2010 estimates of food poverty (BBS 2011). They are in dire poverty and virtually without any assets to cushion lean- season hunger or the crushing blows of illness, flooding, and other calamities. The proportion of extreme poor population and precarious conditions of ultra poor all add up to a compelling case for safety nets to be a critical priority area for public policy. The need for targeted safety net interventions to improve the food security and livelihoods of the extreme poor therefore remains strong.

Social protection has assumed a prominence in the development literature in recent years and the adoption of an effective social protection system now forms a central part of mainstream policy packages to combat poverty and social exclusion. Bangladesh is no exception to these developments and social protection reform has become a major issue within domestic policy discussions. Government spending on social safety nets is substantial at round 15% of public expenditure. Development of an improved framework and delivery mechanisms are at the core of the Government's Sixth Five Year Plan (SFYP) and its Vision 2021 which aims to secure

middle income status on the basis of equity and social inclusion. However, a recent study prepared for UNDP by the Power and Participation Research Centre (PPRC) makes it clear that reforms are needed if these ambitions are to be realised. Moreover, Bangladesh, more than other countries, serves as key case study for the application of social protection in a risk prone environment, heightening the centrality of an effective policy response.

While recent studies provide helpful insights in understanding elements of the targeting process, no comprehensive review is available on the whole process of providing social protection and its nationwide implications. The proposed study will examine issues regarding transparency and accountability in the design and implementation of selected safety net programs in Bangladesh to overcome this gap.

Asia Foundation has come together with key development partners like USAID to involve the parliament on these issues, with the twin objectives of facilitating high level reforms and improving current practice through efficient targeting. The proposed study will identify gaps and overlaps in the existing programmes and will suggest ways for improvement. The specific objectives are to:

- Review the targeting, selection and disbursement process of selected safety net programs;

- Provide a complete scenario on salient features of beneficiary selection, targeting efficiency and leakage in distribution;

- Identify the extent of leakage in the programs with a view to drawing necessary policy conclusions;

- Draw appropriate lessons for further developments of these programs;

- Suggest some crucial policy recommendations for advocacy and campaign;

- Make a compelling case for policy reform, grounded in social protection's contribution to addressing the drivers of poverty and vulnerability; and specifically to support the development and adoption of a National Social Protection Strategy;

- Address key design questions within delivery programmes, notably: achieving effective targeting alongside wide coverage; securing basic entitlements and capabilities; and promoting sustainable graduation from poverty.

The study focus will be directed to the role of:

- Reducing vulnerability, and improving well-being of the vulnerable section of the people (i.e. Old Age Allowance and Widowed Allowance);

- Securing food security and nutrition (e.g. VGD, VGF);

- Increasing awareness and demand among pregnant women for ANC and delivery at the facility level (i.e MHVS) and increasing enrolment and reducing drop-out at the primary school (i.e UPESP).

Methodology

The study will employ a three-track methodology:

The first track will consist of analysis of available statistics on program content, allocations and coverage. An indicative list of the sources of secondary data is given below:

- Government documents/reports;

- Documents/reports of donor agencies;

- Evaluation/study reports.

The second track will consist of a household and community level survey to examine the impact of selected programs at the beneficiary level, problems associated with selection of beneficiaries and disbursement of benefits including the issue of 'leakage' and how the programs can be further improved and strengthened.

The third track will consist of In-depth/Key Informant Interview (KII) with higher level authorities like department of Social Welfare, Department of Women Affairs, service providers and local level administrative (UP Chairman/member, etc) to identify policy level gaps associated with design and implementation of the program.

Both qualitative and quantitative methods will be used for present research. Field survey will be conducted in seven divisions of the country. The primary data will be collected through a sample survey. From each division, the sample will consist of two districts, four upazilas and four unions. Thus, a total of 28 unions will be selected from seven divisions. The sample survey will be based on a format for a couple of checklists for Focus Group Discussion and case study and also a well- structured questionnaire for the household survey in 28 representative unions for the five selected programs (VGD, VGF, PESP, Old Age Allowance, Widow Allowance and Maternal Voucher

Scheme). In each union 60 target beneficiaries will be interviewed with 12 beneficiaries per program. So, from the 28 representing union we will get the information of 1680 beneficiaries under the five safety net programs. The Maternal Voucher Scheme (MHVS) will require special designing as this program is currently being implemented only in 33 upazilas of 21 districts. We are planning to collect information on MHVS from 15 upazilas (randomly selected from 21 upazilas) with 20 beneficiaries from each upazila. This implies that under this program 300 beneficiaries will be especially selected for interview. Thus a total of 1980 beneficiaries under six selected programs will be covered for the present study.

Policy Implications

Despite long-standing and impressive spending in social safety nets (SSN), government support still does not reach many poor and vulnerable households in Bangladesh. Launched in 1975, SSNs now account for 2.5% of GDP (FY 2009-10) and reach 11.6 per cent of the population and 30 per cent of the poor and food insecure. However, since around 40 per cent of Bangladeshi households live in poverty, the programs leave out 35 million poor people. To increase the

benefits that a safety net program can achieve within a constrained budget or to minimise the cost of reaching a given impact, the government should focus resources on the poor and food insecure. While capacity constraints may explain some of the low coverage, targeting errors- inclusion and exclusion-also account for the gap.

The 2005 HIES data suggests that though the per centage of beneficiary households decreases gradually for the highest quintiles, 40 per cent of beneficiary households belong to the top three quintiles. This inclusion error, in turn, reduces the resources available to support the poorest and most food insecure households in the lowest two quintiles.

Recent studies have identified four potential sources of targeting errors. First, geographical allocations of resources do not seem to match poverty rates. For instance, Sylhet Region has the highest per centage of social safety net (SSN) beneficiaries while its poverty headcount rate is second only to Dhaka. Second, indicators used in the targeting process may not reflect the true welfare of households. For example, while literacy and land tenure are relevant to analyse poverty in rural Bangladesh, they are not very useful to identify the extreme poor. Third, even if the

design of the targeting mechanism is sound, political economy and implementation issues at the local level may override it. The reliance of targeting on local authorities for beneficiary selection makes the process prone to elite capture, nepotism and political interference. Fourth, institutional issues at the central level foster overlaps and gaps in coverage. Fifteen ministries run close to 70 programs, with no clear information on number and profile of beneficiaries, multiple recipients and impact assessment.

While very few studies have attempted to provide helpful insights in understanding elements of the targeting process, no comprehensive study is available that assesses the most critical aspects of the process and provides policy-makers with detailed recommendations on the whole process and its nationwide implications. It is expected that the proposed study will identify the underlying governance issues and will enable the GoB to improve the targeting of its SSN so that it better reaches the food insecure and the poorest. In turn, this will contribute to the achievement of the major national goals as specified in the Sixth Five Year Plan and Vision 2021.

Name of the Study: Bangladesher Orthonity O Unnayan: Shwadhinotar Por Chollish Bochhor (Bangladesh's Economic Growth and Development: 40 Years After Independence)

Research Team : Rushidan Islam Rahman

Sponsor : None

Time frame : January 2010 to February 2012[*]

Objectives and Rationale

The major objectives of the study are to analyse the long term changes in the economy, to identify the constraints faced in the development process and to provide suggestions for easing the constraints. As far as possible, the study will cover the four decades after independence. As part of the analysis of economic growth, it will look at the macroeconomic scenario, the development of industry, agriculture and rural non-farm sectors. To assess the development process it will cover the issues related to unemployment, poverty, education, population growth and regional and gender inequality.

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[*] The book has already been published by Shahitya Prakash, 87, Purana Paltan Lane (Paltan Tower, 7th floor).

During the last two decades a large number of studies on current issues of Bangladesh economy have been conducted. In contrast, development performance in a longer term horizon did not receive adequate attention. The present book sets itself with the objective of assessment of the economy and social development from a long term perspective. It will also make policy suggestions which may be somewhat different from studies based on current situation only. The book will be written in Bangla and aims to make a lucid presentation. Such a book written in Bangla is urgently needed as the students, researchers and policy makers use Bangla in their studies and in conducting development debates.

It will cover the following topics:

- Changes in macro-economic indicators and future prospects
- Development of manufacturing Sector
- Changing role of agriculture: constraints and potentials
- Production relations and farm size and the links with technology adoption
- Rural non-farm sector and role of microfinance
- Concepts and estimates of underemployment and progress in employment generation
- Links between growth and poverty, thinking beyond poverty line
- Inequality in education and its impact and regional difference in development
- Demographic transition and its explanations
- Role of women in Industrialisation

Methodology

The book will be based on secondary data, review of existing studies as well as on reanalysis of unit record data of a number of national sample surveys conducted by BBS (e.g. Liberalisation Force Survey, HIES).

Policy Implications

The study will suggest policies for sustaining the accelerated pace of GDP growth and the successes in education, poverty reduction and employment generation.

The BIDS Annual Research Programme (ARP) 2011-2012 provides an overview of the research studies that the Institute plans to undertake during the financial year 2011-2012. The proposed research agenda covers priority issues in different aspects of the Bangladesh economy which have been grouped under eleven thematic areas, such as Agriculture, Food Security and Rural Development; Water Resources Development; Poverty and Vulnerability; Gender Analysis; Growth Issues and Regional Development; Health; Investment, Manufacturing Industry and Labor Standards; Macroeconomic and Trade Policy Analysis; Energy Issues; Climate Change Impacts; Population Studies and Social Protection.

Bangladesh Institute of Development Studies