

Urban-Rural Links and Transformation In Bangladesh: A Review of the Issues

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Executive Summary

Farmers have never only farmed. And city-dwellers have never only had jobs that have nothing to do with agriculture. The livelihood strategies and spaces of both urban and rural residents intertwine. Researchers and policymakers continue to debate how they intertwine and what difference that makes, but these debates arise largely because of context.

Given the importance of context, this paper attempts to contextualize urban-rural links and transformation in a specific country, Bangladesh. Discussions in Bangladesh about how to improve urban or rural livelihoods come mostly from an isolated sectoral perspective, not a holistic one that appreciates intersectoral links. Urban and rural poverty tend to be discussed separately, as if they had no connection. This paper seeks to go beyond these discussions to explore rural-urban interactions and suggest how Bangladesh can take advantage of the synergies to reduce both urban and rural poverty.

As a literature review, this paper has gaps as well as insights. Still, it hopes to provide a template to make similar explorations in other countries and contexts. The paper is organized around types of urban-rural interactions, both sectorally and spatially. After an introduction to the topic, the paper describes the flows of people in urban and rural areas. It then focuses on agriculture, a key element of urban-rural interactions, and describes how livelihoods in this important sector are changing and how they relate to urban-rural transformation. Later sections look at the flows of goods, investments, information and services as well as natural resources and wastes. The paper also emphasizes the need for good governance and the incorporation of spatial considerations in planning and policymaking.

We found that most literature in Bangladesh deals with urban-rural links from the perspective of interactions going from rural to urban areas. There was little information that took an urban-based perspective of interactions with rural areas; that is, how urban-based goods, services and investments support rural livelihoods, or how rural demands for non-agricultural products affect urban livelihoods. Consequently, the sections on migration and agricultural change are the most developed. The sections on goods, information, investments and services, and on natural resources and wastes (through the lens of urban-rural interactions), are less developed, due to a scarcity of information.

Urban-Rural Links

Flows of people, goods, services, information, money, and wastes link rural and urban areas, as do conflicts and competition over natural resources and investment. Transportation and infrastructure, especially telecommunications, are the primary channels for interaction. These interactions also have a spatial dimension, as the interactions occur at levels ranging from the municipality and rural district to regional, national, and international levels. Synergies result from the fact that economic and political activities and livelihoods traverse both urban and rural spaces. Economic policies and political systems must take account of these interactions to make best use of resources and improve livelihoods.

Flows of People

In 1970, only 8 percent of Bangladesh was urbanized. Now the figure is 28 percent, and by 2020 40 percent of the population will live in cities and towns. Rural migration was responsible for almost 60 percent of urban growth during the 1970s and 1980s. Natural urban growth and a redefinition of “urban” and “rural” have contributed the remainder.

Migration is not simply from rural areas to large cities. Secondary cities and market towns are major destinations; policymakers must consider their role in economic growth, politics, and poverty reduction. Rural people also move to other rural areas. This seems especially true of women, who marry and may move with their husband to another place (usually his home) within more or less the same area.

These factors have altered the nature of migration. In the past almost all migration from rural to urban areas was temporary or seasonal. Traditionally men from rural areas spent years in the cities, but sent remittances back to their families, and more often than not returned home. Many (though not all) migrants now seek to settle permanently in the urban areas. More women have begun to move independently to urban areas, especially divorced or separated women or young women seeking work.

In the past the urban-rural tie was a constant, and an integral part of rural (and for migrants, urban) livelihoods. But with increasing permanent migration of families, these “thick links” between urban and rural areas brought about by continuous ties among urban and rural dwellers are thinning, although they are still common. Studies still find substantial amounts of seasonal and temporary (even though “temporary” may imply years of residence in an urban area) migration.

Those districts in Bangladesh with the most outmigration are generally not the most impoverished (in terms of agricultural productivity), but may be land-scarce and flood-prone. They most likely also have fairly easy access to a destination city. Good connections to major urban destinations also give migrants the ability to maintain ties with their home village.

Economic, social, and political factors push and pull people to migrate. The relative importance of these different factors for different individuals results in the emergence of different streams of migrants, diversified by gender, family status, education, age and origin. Some are pulled to the city, especially younger, educated people. Others are more “pushed” because of the trials of earning a livelihood in rural areas.

Migration can also affect the livelihood strategies of those who are left behind. For example, outmigration may force a change in women’s roles, as women left behind when husbands migrate must take on new tasks. We know of no study in Bangladesh that looks specifically at how rural women’s lives change with outmigration. Migration may also result from and may cause changes in land use patterns, especially as average plot sizes become smaller over time. The interrelationships between migration, rural livelihoods, land use and the provision of services remain to be explored in Bangladesh.

Women and the Ready-Made Garment Sector

Although most women still do not work in the ready-made garment (RMG) sector, analysts have paid great attention to it, as it appears to have led the shift from home-based to market-oriented activities. The RMG sector went from 2 percent of female labor in 1981-82 to 30 percent in 1997-98. Ninety percent of workers in RMG are migrants from rural areas, and 70 percent of them are women. In contrast to perceptions that a high proportion of these workers are young, single girls, three-quarters of female RMG migrants live in their own nuclear families or belong to an extended family.

The hours are long, and gender discrimination is rampant. Women have lower-skilled and lower-paying jobs than men, though women appear to be taking on higher-skilled jobs as well.

Despite these negative aspects, urban jobs provide many women with previously unthinkable independence and an opportunity to earn money. This has encouraged greater independence, and women have increasingly assumed the role of breadwinner.

Pulled and Pushed: Two Identifiable Streams of Success and Failure?

Although migrants can be categorized many ways, for policy purposes two streams seem particularly important: those who are pushed and those who are pulled. The poorest generally have to move because they have no options left to them. Those with resources may perceive migration differently. They go because educational or known job opportunities pull them.

These findings challenge the notion that rural-urban migration simply transfers rural poverty to urban areas. New migrants may in fact have contacts and opportunities that enable them to move out of poverty fairly quickly, or avoid poverty altogether. On the other hand, the 2001 national household expenditure survey indicated that urban poverty has increased in Bangladesh for the first time, even as rural poverty continues to decline.

These different streams relate differently to the dynamics of urban poverty and development. While those who are pulled may quite quickly add to the productive labor force (as they have jobs waiting for them or come for education), those who are pushed are simply trying to escape crushing rural poverty. They bring few resources. The different circumstances of each group cast doubt on the “promise” of the city to help them have better lives and provide significant challenges to city and national planners and policymakers who manage the urbanization process.

Social, Political, and Economic Change

Information on the wider social, political, and economic consequences of migration are scarce. No available studies calculate the cost and benefits for individuals and households. Few studies analyze the impacts of remittances on households and the wider rural economy, or analyze the contributions of migrants to the urban economy, or the costs they impose, or the effects of urban and rural interchange on social and political customs.

Agriculture and the Rural Non-Farm Sector

Agriculture and the rural economy in Bangladesh have undergone a process of reform and structural changes in recent years, particularly the liberalization of agriculture inputs and outputs. Overall, the reforms have helped the development of the sector. They may also have encouraged the steady disappearance of the classic rural-urban duality and severe imperfections of rural markets in Bangladesh. With few exceptions, rural areas are increasingly integrated with urban areas through physical infrastructure and communications, and markets and institutions.

In past years, non-farm activities have been driving rural growth more than agricultural production, mirroring conditions in other countries in Africa and Asia. While primary activities such as crop production are located in rural areas and linkages to urban areas are through consumption demand, secondary activities such as processing and packaging activities can be located both in urban or in rural areas and can have both production and consumption linkages. In contrast to primary activities, tertiary activities such as trade and transportation dominate urban areas.

Given the spatial and sectoral nature of the urban-rural continuum and farm/non-farm linkages there, the primary means of ensuring that production and consumption demands are met are markets, infrastructure, and institutions. Whether the urban-rural dichotomy reported in the development literature in 1950s and 1960s continues or it disappears depends largely on how markets in urban and rural areas are integrated with each other, how efficiently goods and services move spatially, how efficient the information dissemination process is, and how efficient formal and informal institutions are.

Farm Sector

During the last three decades, there has been a significant structural change in agriculture in Bangladesh both in terms of its contribution to national economy and employment. Agricultural value added as a percentage of Gross Domestic Product (GDP) declined from around 60 percent in 1972 to around 23 percent in 2001. This decline has not happened due to a decline in agricultural value but growth in other sectors. In fact, overall, agriculture in Bangladesh has performed reasonably well over the past decades.

Commensurately, the share of agricultural employment in total employment has declined from 77 percent in 1974 to about 50 percent in 2001. The absolute numbers of workers in the agricultural sector continue to increase, however, and agriculture remains the major source of rural employment in Bangladesh.

Employment in agriculture is also an important source of women's employment. In fact, during the last decade, the share of women in the agricultural labor force increased relatively rapidly. The major changes in women's roles in recent years seem to be primarily an across-the-board increase in women's participation in the agricultural labor force, with men still dominating in fieldwork and women becoming more involved in preparation and post-harvest activities. Women dominate homestead vegetable production and livestock raising. Men largely control market activities.

Within the different sub-sectors of agriculture, the output composition has also changed. While the crop sub-sector contributed more than 71 percent of agricultural GDP in 1972/73, its contributed only 57 percent in 2000/01. The fisheries sub-sector increased substantially, from 11 percent to 24 percent in the same period. The contributions of the livestock and the forestry sector hovered around 10 to 15 percent and 5 to 10 percent, respectively.

To summarize, there is a declining role of agriculture in national GDP and of the crop sub-sector within agriculture and rural livelihoods. Future growth in agricultural production will not create enough demand to absorb the growing rural labor supply. Therefore, non-crop sectors in agriculture such as fisheries and livestock, and the non-farm sector in rural areas and in rural-urban interfaces will become increasingly important in rural income and employment creation.

Non-farm Sector

There are difficulties in defining what is "farm" and "non-farm," but in this paper we include only agricultural production (whether crop, livestock, forestry, or fisheries) as "farm" and secondary and tertiary activities as "non-farm," even if they relate to agriculture.

Based on a nationally representative survey, income from the farm sector grew at a rate of 1.4 percent per year from 1987 to 2000, whereas income from the non-farm sector grew at a rate of 6.8 percent per year. Non-farm income now contributes, on average, more than 50 percent of total rural household income.

With an increase in non-farm activities in rural areas, large and medium farmers are leaving farming, and landless households are filling their vacuum as tenants. While farming gives a livelihood opportunities to landless households that were not previously available to them, these households are not participating in the more rewarding non-farming sector.

What barriers prevent women and the landless from entering the often more lucrative non-farm sector are not well understood yet. Schooling is one of the important determinants of occupational mobility, yet we do not know much about its relation to change nor the complementary factors needed to enter the non-farm sector.

Bridging Sectoral and Spatial Gaps: Food value chain

What are the causes for the rise of the non-farm sector? Some have argued that growth in crop agriculture and microcredit are factors, but the growth of crop agriculture has been dismal and microcredit does not appear to be the major credit source for non-farm enterprises in rural areas.

One explanation can be found in the development of the modern food value chain. Private sector agro-processors in Bangladesh, such as Aftab Group and Praan Group, and supermarket chains, such as Agora and Nandon, are beginning to pioneer this contribution in Bangladesh.

As opposed to the traditional value chain where village middlemen collect products from farmers, sell to larger middlemen in nearby towns, and then send products to wholesale markets in cities where small retailers buy and then finally sell to consumers, the modern food value chain is highly coordinated from farms to firms, usually by one organization. In a modern food value chain, food processors such as Praan Group contract farmers directly, provide technical assistance and collect their produce from farms. Similarly, supermarkets that are emerging in urban areas, particularly in Dhaka, follow a similarly highly coordinated food value chain.

One of the important drivers behind the emergence of a modern food value chain is the change in the dietary composition of urban consumers in favor of high value products such as fish and meat, and fresh fruits and vegetables. Unlike many other activities such as mechanized transportation that requires a large amount of capital, production of high-value agricultural products such as fruits and vegetables do not have a high capital requirement. This aspect of production may allow smallholders to be competitive with larger producers, giving poor rural households an opportunity to improve their livelihoods by connecting with urban demand.

Many of the rural non-farm activities, such as food grading and food processing, can add significant value to this chain and can offer new livelihood opportunities for landless households and women. Strictly speaking they often even are no longer “rural-based,” but extend into secondary and primary cities. Some activities such as food sorting, grading and packaging can offer permanent employment opportunities, particularly for women.

Bridging the Rural-Urban Divide: Infrastructure, Market and Institutions

Infrastructure provides the bridge between rural and urban areas and creates a rural-urban continuum. By ensuring goods and services move efficiently and effortlessly, it ensures higher prices for producers and lower prices for consumers. Development of markets in rural areas creates further opportunity for farm and non-farm growth. Institutions that govern rural markets need to update and change once integrated into the rural-urban continuum.

The rural development strategy prepared by the Bangladesh Government in 1984 served as a basis for the subsequent development of rural physical infrastructure and markets (roads, markets, storage facilities, electricity, and minor irrigation). Despite plans and apparent

investment, it is very difficult to get information at a national or regional level on infrastructure development in Bangladesh. Comprehensive data and studies on infrastructure and its effects on livelihoods and rural-urban connections are practically non-existent, although there is some information on roads. We found that though some improvements have been achieved in road quality, access to rural roads and the total road network have not experienced any dramatic increase. The total network has hovered around 200,000 kilometers during the 1990s.

With little change, changes in road infrastructure do not appear to have made a major contribution to non-farm or farm growth in the 1990s, which is not to say there is not room for improvement or that localized changes may not have occurred. But we have not found any micro-level studies specifically examining the role of physical infrastructure in farm and non-farm development and in urban and rural linkages. Limited evidence available at the local level in Bangladesh shows a statistically significant positive relation between agricultural output and rural roads and growth centers. In general, there is also evidence that rural road development is a critical factor in farm and non-farm employment, especially of the rural poor and of women. The role of other types of infrastructure, such as the construction of bridges, electricity, and of telecommunications, remains to be examined.

Any such study should examine the ways in which physical infrastructure in Bangladesh is provided. Currently physical infrastructure provision in Bangladesh, from planning to implementation, is highly centralized. Rural households and communities scarcely participate, with the role of women especially circumscribed. This top-down planning decreases the possibilities for the infrastructure to have a real impact or not on the livelihoods of the rural poor.

In Bangladesh and other countries, if done properly, public investment in infrastructure such as roads can be a least discriminatory and most useful way to open new income and employment opportunities for women and landless households. Though the general benefits of infrastructure and markets are well known, there are many questions yet to be answered. What is the minimum set of infrastructure and markets needed to ensure a viable linkage/continuum between rural and urban areas? What type of public infrastructure is needed most for pro-poor non-farm growth? If infrastructure is welfare-improving for landless and women, how should it be provided? What are the alternative institutional mechanisms when public provision is inadequate?

In the specific case of Bangladesh, the Local Government Engineering Department (LGED) has developed a number of physical market places. Though they are helping to bring consumers and producers together, social restrictions mean that women and the poor will have a difficult time to gain acceptance there. What are the impacts of these market places on farm and non-farm growth? What are the formal and informal barriers to entry, and how can we make these market places more inclusive for women and the poor?

Agriculture, Rural Areas, and the Urban Economy

Researchers on Bangladesh have so far concentrated on describing the shift from agricultural production to non-production activities. Yet they focus largely on what is happening in rural areas, without considering that much of this happens in “urban” space of market towns and secondary cities.

Agriculture enters the urban environment through production in urban or peri-urban areas and through employment and investment in other parts of the agricultural and food system. Data on the geography of the different components of system, including the agents, their significance, and their connection with urban areas, are scarce. For example, we need information on what

goods farmers market where. We need to know more about the main actors behind those changes in agricultural production (the agribusinesses, supermarkets, and large traders), who are almost always urban-based, a prime illustration of a rural-urban link that is often forgotten. Their involvement raises a number of questions about the well-being of farmers and of the region. Will producers have enough economic power and legal standing to negotiate mutually beneficial contracts with adequate protections? Supermarkets themselves are not producers nor are they organizationally oriented to be ones. They can serve as important purchasers, but they do not have the same incentives as producers to identify which crops will generate the greatest farmer profit. As increasingly important buyers, will they lead small farmers into potentially exploitative, monopsonistic relations?

Flows of Goods, Information, Investments, and Services

Generally the flow of goods is thought of as going from rural to urban, and the flow being agricultural products, mostly food. But urban areas must also be providing some goods and services to rural areas. Information is lacking about this “urban” side of the rural-urban exchange, however. We found practically no literature that explored the interaction of rural consumers or producers with urban suppliers of goods or services or showed the importance of rural consumers to the urban economy. Financial, telecommunications, and legal services, for example, are critical to “urban” development in large cities as well as small towns and for non-farm growth.

We also found little about how urban-based public or private investment finds its way to rural areas, for agricultural production or for non-production activities. Public investments in health and education are especially important to ensure that rural dwellers have the skills and health to be able to make a successful transition to non-agricultural or urban employment.

Spatial Interactions and Flows: Natural Resources and Wastes

Urban and rural interactions are characterized not only by flows and synergies, but also by conflict, particularly at the urban periphery (peri-urban areas) and particularly over natural resources.

Although we have no studies specific to Bangladesh, industrial pollution likely occurs side-by-side with pollution caused by agricultural activities (drainoffs of fertilizer, pesticides, herbicides) and livestock, especially cattle, that occur on the urban periphery or even inside densely populated areas. Proliferation of farms that grow high-value fruits and vegetables close to the city, which often require greater use of agrochemicals, may raise the risk of environmental damage.

Of course, we also know agriculture and industry can co-exist, in a positive symbiosis. Some cities around the world have begun programs to recycle organic urban waste for compost for agriculture. Others promote urban agriculture as a use for wastes but also as a way of greening the city, as well as to increase incomes and improve diets.

As urban areas grow and encroach on previously rural land, the potential for conflict over control, use, and spillover effects (as with waste runoff) has increased. Most reporting, however, on the use of natural resources at the urban-rural interface, however, seems anecdotal. Studies are urgently needed on the nature of the peri-urban interface and the extent of impact of pollution on the rural and the urban environment. Studies are also needed how Bangladesh will handle coming competition for natural resources, including land but especially water, between urban and rural areas and between farmers and industrialists.

Spatial Interactions: Policies, Policymaking, and Planning

The policy environment is important in shaping urban-rural interactions. Government policies affect how the private sector acts and makes decisions about where and in what to invest, for example. The overlapping influence of different institutional actors adds a spatial dimension. Municipalities, rural district administrators, regional and national governments, and the international environment operate on different parts of the urban-rural continuum.

Small and medium cities play crucial roles. The smaller cities are the places where almost half of urban dwellers live, and where most rural people have their “urban” interactions. By benefiting from and generating rural growth, and relieving pressure on larger cities, they have the potential to assist in reducing both urban and rural poverty.

Though the broad policy prescription of paying attention to secondary cities and market towns and of ensuring regional planning has echoes of past failed attempts to establish “growth poles,” we have learned lessons and the overall thrust of the strategy is sound. Much of the analysis and recommendations in this document reflect those lessons: that past attempts paid little attention to local context, including the needs of agriculture and local economies; they failed to provide support for small and medium enterprises; and they tended to have a bias of top-down, stereotypically urban-centric growth and planning that did not understand the links between urban and rural areas (and so the importance of each to the growth of the other) and that largely conceived of them as separate rather than integrated and synergistic spheres of activity.

Planning in Bangladesh continues along these restrictive lines. Despite fairly similar ecology, significant regional inequalities exist in Bangladesh. Yet central government budget allocations and planning decisions still fail to take such regional disparities into account. Instead, expenditure allocations are apparently made on a per capita basis, without regard to need, and then further distorted by political influence.

With diversity of flows and livelihoods spread across urban and rural areas, policymakers and programmers must think regionally. They cannot plan “only” for agriculture and only within restricted spatial concepts of what is urban and what is rural. Needs analysis and planning must occur on a regional level, and, to take advantage of a virtuous cycle of urban-rural development, must link agricultural-based development to development of the small and medium size urban centers.

Among the first steps needed would be to establish planning departments in each city and municipality (with coordination responsibility for regional planning with the district and divisional governments), and to have the government disaggregate the budget by division and region. Of course, institutional capacity, inertia, and interests may make regional-level planning difficult. Without it, however, Bangladesh will be certain to misallocate resources and fail to take advantage of urban-rural synergies to reduce poverty and spur economic growth in both urban and rural areas.

I. Introduction

Farmers have never only farmed. And city-dwellers have never only had jobs that have nothing to do with agriculture. The livelihood strategies and spaces of both urban and rural residents intertwine. Of course, researchers and policymakers continue to debate how they intertwine and what difference that makes, but these debates arise largely because of context. For instance, is urbanization an essential prerequisite to growth, or an outcome and a parasitic exploitation of the countryside? Is a dynamic agricultural sector the key to equitable growth, or can industrialization propel the economy even with low agricultural productivity? Most likely, reality reflects both perspectives.

Much has already been written on urban and rural economies and livelihoods separately. This paper attempts to gain further insights by placing a lens on the links between urban and rural areas. This lens helps to highlight and understand the *connections*, synergistic or antipathetic, not their separateness. Seeing the situation through the lens of urban-rural links and transformation can suggest new critical levers for policy actions.

Given the importance of context, this paper attempts to contextualize urban-rural links and transformation in a specific country: Bangladesh. In Bangladesh, what are the most important links? What differences can these links make to reducing urban and rural poverty? What do we know about these links, and what more do we need to know, especially in light of a host of “—ations”: urbanization, globalization, industrialization, or rural-urban transformation?

Although much attention has focused on poverty reduction in Bangladesh, discussions tend to provide general overviews or highlight specific sectoral issues. Actions to improve urban or rural livelihoods still come mostly from an isolated sectoral perspective, not a holistic one that appreciates intersectoral links within or across locations. Urban and rural poverty also tend to be discussed separately, as if they had no connection. This paper seeks to go beyond these discussions. It explores the nature of rural-urban interactions and suggests how they relate to a key correlate of growth – the rural and urban transformation – and how Bangladesh can take advantage of the synergies to reduce both urban and rural poverty.

As a literature review, this paper has gaps as well as insights. Still, it hopes to provide a template for others to make similar explorations in other countries and contexts. It organizes discussion around the types of flows and interactions that exist, both sectorally and spatially. After an introduction to the topic, the paper describes the flows of people in urban and rural areas. It then focuses on agriculture, a key element of urban-rural interactions, and describes how livelihoods in this important sector are changing and how they relate to urban-rural transformation. Later sections look at the flows of goods, investments, information and services as well as natural resources and wastes. The paper also emphasizes the need for spatial considerations in planning and policymaking.

This review is based largely on over 20 interviews conducted with leading researchers and development practitioners during a visit to Bangladesh from March 14 to March 25, 2004 (See Appendix 1) and on documents collected on that visit. We found that most literature in Bangladesh dealt with urban-rural links from the perspective of flows from rural to urban areas. There was little information that took a perspective looking from urban areas towards rural areas; that is, how urban-based goods, services and investments support rural livelihoods, for

instance, or how rural demands for non-agricultural products affect urban livelihoods. Consequently, the sections on migration and agricultural change are the most developed. The sections on goods, information, investments and services, and on natural resources and wastes (through the lens of urban-rural interactions), are less developed, due to a scarcity of information.

What are the links? Why do they matter?

Flows of people, goods, services, information, money, and wastes link rural and urban areas, as do conflicts and competition over natural resources and investment. For policy purposes, we have to go beyond naming the links to understand *how* they are linked, for it is the nature of the linkages that are most subject to policy change. The flows are linked mainly by transportation and communications infrastructures. The quality of the infrastructure, the socio-cultural context, and the policy environment shape these interactions. Ideas, influences, and incentives move from one area to another via these channels. These interactions also have a spatial dimension, as the interactions occur not only at a municipal and rural district level (a parish, a county, or a thana, for example) but at broader local, regional, national and international levels.

Potential synergies emerge not only from links but also from the fact that urban and rural livelihoods themselves retain components of the other. Understanding and promoting urban-rural synergies in the economic and political realms are particularly critical for economic growth and poverty reduction. For example, the agricultural and food system traverses urban and rural boundaries, connecting producers, processors, transporters, retailers, and consumers. Some activities occur in rural areas and others in urban areas. Economic policies that work to develop the system as a whole will benefit both urban and rural dwellers. Politically, national and regional institutions must take a broader view of how rural and urban areas, including secondary cities and market towns, benefit from one another and minimize obstacles to coordination of regional planning. Political systems must allow policymakers to plan and act at local and regional levels to promote these interactions and integration, rather than operating in separate urban and rural spheres, and so better manage rural-urban transformations.

UNDP assessments in Nepal, for example, showed that conventional approaches to planning – dividing planning into rural and urban divisions – impeded information flows and coordination between national, district, municipal and village planners. Urban planners focused on infrastructure. Rural planners ignored urban markets. In Nepal, three-quarters of basic goods that Nepalese farmers could produce, like potatoes and fruits, were imported. And urban centers served merely as transit points for rural capital and goods on their way to *external* markets.

Synergies occur not only at the level of policy and planning but at the level of the household and individual as well. For example, the livelihoods of urban dwellers can have "rural-like" components. Although living in cities, residents can be involved in agricultural production, or have jobs in food marketing or processing, or maintain rural links with property or relatives in rural areas. Likewise, the livelihoods of rural dwellers can have "urban" components. They may pursue off-farm activities, especially food processing or other manufacturing or services not even connected with agriculture. And rural dwellers may send family members to earn a living in cities (and send back some of their earnings), or they may move themselves.

A Virtuous Circle of Urban-Rural Development?

The conceptual model that underlies much of this discussion is one of a “virtuous circle” of rural-urban development (Tacoli 1998). With dynamic agriculture, farming households will earn higher incomes, and likely increase demand for agricultural labor. This will lead to higher demand for goods and services, creating non-farm jobs and diversifying activities, especially in localities and towns close to the area of increasing, or higher value, agricultural production. Expanded production may demand additional rural labor, especially if the marketing and processing components of the agricultural and food system increase. Non-farm activities expand, and the multiplier effect of higher incomes based on agriculture-driven growth continues. In largely rural countries, such as Bangladesh, the dynamism of the agricultural sector is inevitably linked with poverty reduction.

The food and agricultural *system* is a key component in this “circle”, linking urban and rural areas through production, demand, marketing, and processing. When we conceive of a food and agricultural chain, a *system* from production to consumption, we can immediately understand the importance of agriculture to livelihoods of both urban and rural dwellers and we can understand how a narrow focus only on agricultural producers and agricultural production seriously underestimates the importance of agriculture to the entire economy. Beyond the direct benefit of agriculture to those who work in the agriculture and food system, urban dwellers can benefit from dynamic agriculture as rural areas demand more services, goods, and investments from urban-based businesses. If the economy grows synergistically, rural areas will also benefit from a more dynamic urban area, which increases demand for food and other agricultural products and, commensurately, for investment.

Tacoli (1998) notes some potential problems with this model. It assumes that farmers will have access to the information, inputs and services, including access to technology, land and capital, needed to increase agricultural production. Do Bangladesh farmers have adequate information and access to inputs so that they know about and can respond to urban-based or export demand? Is infrastructure in place to reduce transactions costs and make their prices competitive?

The model also assumes that markets are highly impersonal mechanisms for economic exchange. But do particular groups or do particular policies determine access and control by some groups to the detriment of others? Policies may favor some crops or some form of landholding, which may skew benefits away from poor or smallholders or the landless, and toward the elites. For example, in Brazil, given landholding patterns, infrastructure and inputs, the promotion of orange production skewed incomes even more toward the agricultural elite and toward enhancing their links with large metropolitan areas and export market. As a result, development bypassed smaller market towns and intermediate cities.

Relatively equitable landholdings lead to a widespread increase in income, generating substantial and widespread demand, in a way that increases only in the hands of a few would not. In South Asia, oligopolies tend to control grain markets through their control of transportation, capital, and information (Harriss-White 1995). Social class, or caste, or gender may also exclude participants¹.

¹ Landholding in Bangladesh is not distributed particularly equitably, although less concentrated than in many other countries. Of those with farm holdings of 0.5 acres or more, 25 percent have 9 percent of the land, while 9 percent hold 32 percent of the land. (BBS 1999) With the breaking up of even the large plots over time, the trend has been to ever smaller average plot size and perhaps more equitable distribution (but with perhaps ultimately plot sizes too small for supporting livelihoods). With the rising participation of

The basic assumption for the “virtuous circle” to take hold is that rising income from agriculture drives the growth of non-farm activities. The alternative is that economic growth occurs in spite of a lagging agricultural sector. This result leaves agriculture and many rural poor behind. Such a path of development also leaves behind many of those in intermediate cities and smaller towns whose economy and livelihood are based on or intimately connected with the health of agriculture. A better pathway out of poverty is to provide the conditions that would promote growth across and synergies between sectors, and encourage the allocation of investment to the sectors with the highest return, with a minimum of policy distortion.

Another problem with this “virtuous circle” model is that it focuses almost entirely on rural development. It scarcely sketches out the implications of rural development for urban poverty. Will urban-based businesses respond to a more dynamic agriculture with more investment or provision of ag-related inputs to rural areas? Will they rise to meet rural demands for non-agricultural goods and services? *Can* they? We know little about these connections, and this review confirms this is one of the major gaps in our knowledge about rural-urban transformations.

Defining Urban and Rural

In terms of a broad understanding of livelihood strategies and economies, defining areas as being “urban” or “rural” can be useful. But using these definitions promotes the idea that urban and rural areas have well-defined characteristics and that they operate in spaces quite isolated from one another. Even then, what is urban in one country can be called rural in another, as countries vary definitions by various criteria, including population size, density, and available infrastructure and services. One of the criteria in the Philippines, for example, is that an agglomeration have at least 1000 inhabitants with the majority not involved in farming or fishing. In Benin, any headtown with a population of more than 10,000 is a town if it has at least four of the following: post office, tax office, public treasury, bank, running water, electricity, health care facilities, or secondary school (Tacoli 1998). With such a high population density, much of rural Bangladesh can seem “peri-urban” when compared to the genuine rural isolation found in many African or Latin American countries. Likewise, smaller urban centers may have more of a rural character than an urban one, but definitionally they are no less “urban” than a metropolis. Trying to state consistently what is urban and what is rural and draw internationally valid conclusions are difficult tasks.

Within a country, the boundaries of administrative units do not, and generally can never, map neatly into economic activities. An administrative boundary may exist but the livelihood strategies of those on either side of the line are usually much the same, simply part of a transition from urban to rural in which a line must be drawn somewhere. Similarly, connections among livelihoods extend across these boundaries. For example, roads, rails and rivers link farmers with markets but cross territories managed by municipal, rural, provincial, and national authorities.

In addition, cities have economic and ecological footprints larger than their boundaries. They serve as important hubs for services, goods, and markets for surrounding smaller towns and rural areas. They draw on and may pollute an area much larger than they occupy

agribusiness and marketers in production, however, it may soon matter less who controls the land than who controls production.

administratively. The “boundary” to draw to understand urban-rural interactions in this case must be regional and go beyond municipal limits.

The Analytical Framework

This paper is structured around the ways in which urban and rural areas interact. Primarily, these interactions center around:

- people (primarily migration)
- goods, information, investments,, and services (with special attention to agricultural change)
- natural resources and wastes
- governance, especially issues of decentralization and planning

A separate section is dedicated to each of these interactions in Bangladesh, to the extent possible given available literature. Each section identifies key policy issues, questions, and knowledge gaps in Bangladesh for that area.

Two main points underlie the discussion of urban-rural links and transformation in this paper which by dint of available information in Bangladesh leans toward emphasizing the rural side of the interaction. First, in Bangladesh agriculture is the base of the rural economy, and agriculture underpins the agricultural and food system. The health of the agricultural and food system thus drives the rural economy and its links with urban areas, from demand of the cities for food to the demand by rural areas for investment, agricultural inputs, and other urban-based goods and services. Urban areas can never compete with rural areas as the primary locus of agricultural production. Even as agricultural production diminishes as a proportion of the economy, agriculture will thus continue to be the basis for the rural economy, including off-farm and non-farm activities (directly or through second-round effects).

Second, because the agricultural and food system maps the urban-rural continuum and because economic activities do not divide neatly into administrative units, policymakers must take a regional perspective if they are to capture the benefits of urban-rural links. They must respond to the needs of the regional economy, both “urban” and “rural” sectors, to promote synergies between them to promote growth and reduce both urban and rural poverty. From this perspective, the importance of decentralization, or at least regional-level planning, and of secondary cities and towns becomes clear.

II. Flows of People

Rural-urban migration is a prime manifestation of change in agriculture and in the rural and urban economies. In the past much migration to urban areas was temporary or seasonal. Men from rural areas often spent years in the cities, but sent remittances back to their families, and more often than not returned home. The urban-rural tie was a constant, and an integral part of rural (and for migrants, urban) livelihoods. But with permanent migration of families increasing, these “thick links” between urban and rural areas brought about by continuous ties among urban and rural dwellers are thinning.

This section describes the process of urbanization and of migration in Bangladesh in the past few decades. It notes where people come from, where they go, and who they are. It also puts forth a hypothesis that two different streams of migrants have emerged, some who are pushed from rural areas, and others who are pulled. These different streams relate differently to the dynamics of urban poverty and development. While those who are pulled may quite quickly add to the productive labor force (as they have jobs waiting for them or come for education), those who are pushed are simply trying to escape crushing rural poverty. They bring few resources. The different circumstances of each group cast doubt on the “promise” of the city to help them have better lives and provide significant challenges to city and national planners and policymakers who manage the urbanization process. The section also describes some of the experiences of women with migration and some of the social, political, and economic effects of change.

Urban and Rural Growth

As UN (2002) figures show, in 1970, only 8 percent of the country was urbanized, and migrants were a relatively small proportion even of this total (Table 1). But change was underway. The urban growth rate increased from 3.9 percent per year in 1950-55 to a high of 10.7 percent in 1975-80. The growth rate then declined to about 4.3 percent per year today. The rural population has been growing at about 1 to 2 percent per year since at least 1970, a rate that is slowly declining. The rural population will practically cease to grow by 2020, while population growth in urban areas will continue.

Urban growth has been consistently higher than rural growth for at least the past 30 years, and so today about 28 percent of the population lives in urban areas. By 2020, about 40 percent of the population will live in cities and towns. The UN (1993) estimates that rural migration was responsible for almost 60 percent of urban growth during the 1970s and 1980s. Natural urban growth and a redefinition of “urban” and “rural” have contributed the remainder.

A principal reason for the “rise” in urban growth rate in the 1970s is almost certainly the reclassification of some previously rural areas in that period. But we have little explanation for why the rates today are what they are. The rural areas still hold a large potential pool of urban migrants. Are urban and rural incomes, or living standards, becoming closer together so that urban areas are no longer so attractive?

Another question is the significance of intermediate and secondary cities as destinations. As Table 1 shows, four cities in Bangladesh are over 750,000, and now hold over half the urban population: Chittagong, Dhaka, Khulna, and Rajshahi. Dhaka is by far the largest, with over 12 million people and over a third of the total urban population of Bangladesh.

The share of these cities in the overall urban population declined from 51 percent in 1970 to 43 percent in 1980, indicating secondary cities were growing even faster during this period. From 1980 to 2000, however, these large cities grew faster than secondary cities. Their proportion of the urban population increased to 54 percent. These larger cities and the secondary cities now appear to be growing at about the same rate, although Dhaka growing faster than the others.

The secondary cities, then, seemed to hold the greatest attraction a few decades back. But it is important to recognize that they are still growing just as fast as the largest cities and they continue to be home to almost half of Bangladesh's urban population. As congestion and political conflict increases in Dhaka, Dhaka's attraction may decrease. The establishment of well-connected export processing zones in other areas may attract industrial investment and shift jobs to those locations, as happened in Mexico (Tacoli 1998). Or, with a renewed emphasis on agricultural production that links to non-farm activities and urban development, cities in those regions may also experience job growth. Unfortunately, we have little information about the roles of secondary cities and towns in Bangladesh in either urban or rural development.

Migration: Where do people go? Where do they come from?

The lack of time-series of nationally or regionally representative data complicates the study of migration in Bangladesh. The government collects larger datasets, such as the population census, only infrequently, and researchers otherwise can often only conduct smaller, more localized, studies. Little information is available from the most recent years. In addition, many of the more general studies available for this review do not clearly mark out the characteristics of the data (how representative the survey is of national trends, for instance, or the sample size and selection process). Studies sometimes appear to reference the same data, making it difficult to know whether figures in one study are confirmation or simply repetition of findings in another. General insights must rely on piecing together results from the available studies and on confiding in judgments of reliable scholars, to see how well, together, the sources produce a coherent picture.

Available studies do highlight that migration between urban and rural areas is not the only type of migration. The 1991 census calculated that 6 percent of households move each year. (Figures from the last census are not yet available.) Eighty-five percent of these moves are from rural to urban areas. Seven percent are within urban areas, six percent within rural areas, and two percent from urban to rural areas, which may largely be rural residents returning home, two percent of the total.

Using the Bangladesh Institute of Development Studies' (BIDS) national village sample (a panel data set generated from 62 randomly sampled villages), Rahman et al. (1996) found somewhat similar results. In that study, nearly two-thirds of rural migrants went to urban areas, while 10 percent went to other rural areas. Twenty-four percent went overseas, a category most migration studies do not clearly account for. Of those moving to urban areas, about half went to divisional headquarters, including Dhaka, while the other half moved to the nearest thana or district headquarters.

Afsar (2002) notes that certain spatial trends have emerged. The primary geographical origins of rural migrants are the central parts of Bangladesh, with more than 90 percent of poor migrants coming from the districts of Barisal, Comilla, Dhaka, and Faridpur. A large proportion of the poorer migrants head directly toward larger cities, while a substantial proportion (Afsar cites one-third) arrive at larger cities via small towns or secondary cities.

Those districts with out-migration are generally not those that are the most impoverished (in terms of agricultural productivity). But they may have land-scarcity and be flood-prone. They most likely also have fairly easy access to a destination city (Afsar 2002, Islam 2003). Good connections to major urban destinations provide migrants not only with easier access but also give them the ability to maintain ties with their home village. This allows them to simultaneously participate in urban and rural life, or more easily spread their livelihood strategies between the two. This increases the attraction of well-connected cities like Dhaka, which is within about 6 hours road travel of at least half of Bangladesh. Practically all rural dwellers now live no more than an hour or two from a hard-surfaced road.

Table 1. Urbanization in Bangladesh, 1970-2020

	1970	1980	1990	2000	2010	2020
Urban Population (000)	5,059	12,713	21,750	34,354	52,223	74,432
Rural Population (000)	61,420	72,725	88,275	103,085	115,703	123,209
Total (000)	66,479	85,438	110,025	137,439	167,926	197,642
Percent urban	7.6	14.9	19.8	25.0	31.1	37.7
Urban growth rate (annual)	7.8	5.8	4.7	4.3	3.7	3.0
Rural growth rate (annual)	2.1	1.9	1.7	1.3	0.8	0.2
Cities > 750,000 inhabitants						
Chittagong	693	1,332	2,265	3,651	5,389	na
Dhaka	1,474	3,257	6,621	12,519	19,393	na
Khulna	325	632	973	1,442	2,081	na
Rajshahi	108	238	517	1,035	1,676	na
Percent of urban population						
Chittagong	13.7	10.5	10.4	10.6	10.3	na
Dhaka	29.1	25.6	30.4	36.4	37.1	na
Khulna	6.4	5.0	4.5	4.2	4.0	na
Rajshahi	2.1	1.9	2.4	3.0	3.2	na
Total	51.3	43	47.7	54.2	54.6	na

Source: United Nations. 2002. World Urbanization Prospects. The 2001 Revision.
<http://www.un.org/esa/population/publications/wup2001/wup2001dh.pdf>.

These findings suggest that 1) rural-to-urban migration is the principal migration stream, and so is a major contributor to urban growth; 2) infrastructure and proximity are important influences on migration; and 3) migration and development policies should pay special attention to secondary cities and market towns, since half of migrants may go to Dhaka but at least half of them do not and because, to relieve pressure on Dhaka, Bangladesh may need to "pull" migrants elsewhere.

Migration: Who are they? Why do they migrate?

Historically, with a largely rural economy and little industrialization, most migration from rural to urban areas was men who went to the cities for temporary, non-agricultural work. Men seldom migrated with their families, and women hardly ever came alone. Women moved primarily within their rural or urban space. They usually moved because of marriage, and usually not far from the urban or rural locality where they had grown up.

By the 1990s, the situation had changed. Migration is no longer one rather undifferentiated flow of men from rural to urban areas, who go to the cities with an idea of sending money back to the rural households. Many (though not all) migrants now seek to settle permanently in the urban areas. More women have begun to move independently to urban areas, especially divorced or separated women or young women wanting to work in the garment factories. Others work as house servants. As job opportunities open up and women become more informed about them, more women and more families are more likely to come. The changing sex ratio in the major cities provides evidence for the increase in migration by women and families. The male-female population ratio for Dhaka was 165 in 1951, but declined to 137 in 1974, 126 in 1991 and 123 in 2001 (Afsar 2001).

Economic, social, and political factors both push and pull people to migrate. Migration patterns will continue to be diverse and changing as they react to changes in these forces. Likewise, migration can then change the livelihood strategies of those who are left behind. For example, outmigration may force a change in women's roles, as women who move to the cities discover greater freedoms and introduce those perspectives back home or as women who are left behind when husbands migrate must take on new tasks.

We can speculate that poor women left behind and who have no visible source of support may experience more harassment if they must look for work outside the household, but they may also experience greater acceptability. The burden they bear to care for their families -- to feed, clothe, shelter and school their children, for instance -- may increase, but conceivably it is relieved somewhat by additional income from a husband in an urban area. Stories of women whose husbands ultimately abandon them, however, also abound.

On the other hand, traditional gender restrictions and living patterns, such as having to live with her husband's family after marriage, may mean that a woman actually experiences little difference in her life with or without her husband. She may not, then, become more involved in agricultural or non-farm activities and may not have additional control over household resources, although experiences in other countries suggest she will. For example, in Swaziland, the government provided a tractor-hire service for rural residents, including women. In combination with remittances from male relatives working in South African mines, women farmers were able to increase their productivity in spite of a dearth of male labor (Simelane 1995). We know of no study in Bangladesh that looks specifically at how rural women's lives change with outmigration.

Migration may also result from and may cause changes in land use patterns. Rising population density, proportional inheritance rules and highly liquid land markets have reduced average plot sizes and margins of profitability (Kuhn 2000). The fragmentation and division of land left many households without enough land to earn a living, encouraging migration or involvement in non-farm income-generating activities. Alternatively, it may have led others to lease out their land, rather than attempt to sharecrop it. In some areas of Turkey, as men left the land, sharecropping was abandoned over time, but women continued to be involved in subsistence

agriculture and organized reciprocity-based community relations around this activity (Ilcan 1994). Clearly what is going on in the non-farm and the urban sectors, then, has profound effects on rural livelihoods. But the interrelationships between migration, rural livelihoods, land use and the provision of services remain to be explored in Bangladesh. What are the changes in land use patterns? And are they an outcome of migration? Or the result of underlying factors that are pushing migration? And how do they affect the rural economy and rural livelihoods of both men and women?

The relative importance of these different factors for different individuals results in the emergence of different streams of migrants, diversified by gender, family status, education, age and origin. Some are pulled to the city, especially younger, educated people. Others are more “pushed,” especially those who have practically exhausted their financial and social capital, such as the landless or older women who are divorced, abandoned or separated. For example, in Bangladesh farming areas, it has become more difficult to live off the land as average plot size becomes smaller and smaller over time. As opportunities in rural areas decline, individuals look to cities for jobs. Rural dwellers may also move for jobs, health care, or schools, to get married, or to avoid domestic violence, political strife, or debt (Hossain 2003).

Clearly, government policy has direct and indirect effects on these pulls and pushes. Improved information and communication infrastructure encourages migration by providing rural dwellers with easier, cheaper access and better information on social and cultural opportunities and living and employment conditions (Bhuyan et al. 2001).

While no evidence indicates that improving slum conditions per se draws people to the city, better transport infrastructure that links rural and urban areas and better job opportunities do. The government generally invests more heavily in education, health, transportation, and communication in urban areas than in rural ones (Islam 2003; Hossain 2001; Bhuyan et al. 2001). With about one-third of the population, urban areas receive about half of the government budget. In addition, air, sea and river ports are located in urban areas. As much as 80 percent of credit goes to the urban sector, generally benefiting larger rather than small and cottage industries that may be located in towns or villages (Islam 2003).

In spite of a declared government policy of decentralization, the actual development of industries has concentrated overwhelmingly in Dhaka. Most of the garment factories are located in Dhaka, as are almost all of several smaller industries, such as rubber, furniture, publishing, footwear and leather. In this sense, existing urban bias is not about price subsidies or slum improvement but the concentration of public investment in urban areas that provides jobs and facilities that are the primary cause of migration. Still, in a tribute to failed planning and politics, cities in Bangladesh have, for the most part, proved incapable of accommodating the influx of people.

Migration studies generally gather data about migrants at their destination. Few available studies have collected information from households at the origins, and so do not allow for in-depth understanding of the causes of migration. We do not know the actual rates of migration for groups, and so we should be cautious in attributing causes and extrapolating figures to the national level. Although studies conflict on various points, some general trends do emerge.

Afsar (2002) cites a number of past studies, including her own from the late 1990s, that show that migrants to slum and squatter settlements were predominantly from landless families, with many of them being agricultural laborers. Migrants to non-slum areas tended to be students and “the unemployed”. Bhuyan et al. (2001) found that most migrants to Dhaka belonged to

one of three categories: students (37 percent), day-laborers (10 percent), or the unemployed (15 percent).¹ These studies support much earlier findings from Chaudhury and Curlin (1975) that found the highest out-migration rate was among domestic servants, then mill and office workers. Farmers had the lowest migration rates of all. This was potentially because many non-farmers possessed skills most applicable to urban areas, and did not have land to encourage them to stay in the rural area. (The same reasoning would of course apply to the functionally landless, who as Afsar notes are also among those prone to migrate.)

Despite a greater number of female migrants, gendered patterns of migration still exist. BBS figures indicate that 40 percent of migration in the 1990s among men was from rural to urban areas, as compared to only 28 percent of women's migration. Fifty-six percent of women moved within rural areas, probably due mostly to marriage (BBS 2000). Bhuyan et al. (2001) found that 47 percent of men moved to larger industrial areas, while 45 percent of women went to *non*-industrial areas, supporting the idea that women tend to stay in their respective geographical spaces, frequently because they move for marriage.

There are few studies that analyze in detail what migrants actually do, although researchers seem to believe that they join the ranks of the urban poor, often in the informal sector. But data are scarce. Information from studies of garment workers, however, suggests that they may not stay in any one job long: In that sector, which has a large proportion of migrants, turnover is high. Women are at the job for an average 2.4 years, and men, at 1.8 years, even less. The turnover rate for unskilled workers is even more rapid, 1.5 years (Afsar 2003c).

Although these figures are useful for understanding the needs of migrants (since they provide a profile of who comes), studies need to be conducted in the origin locations to understand what factors push and which ones pull. For example, Bhuyan et al. (2001) found that 21 percent of those unemployed migrated, whereas only 5 percent of students did. (Even though, as noted, 37 percent of migrants are students. This simply indicates the large number of students at the origin. So even a small proportion of them, when they migrate, is a large proportion of the total migrant population.) Unemployment would seem a more powerful factor than continuing education, then.

Bhuyan et al.'s (2001) study also polled about the "push" and "pull" factors. Seventy-six percent of the respondents said they looked for better economic conditions. Ten percent appreciated the greater freedom for women in the cities. Eight percent said they migrated to get a better education (not necessarily students at the time, so the figure differs from above). Yet not all was roses. Fifty-six percent found overcrowding took away from the attraction of the city, about the same as cited pollution. Twenty-eight percent said lack of employment was a problem, and 17 percent cited a lack of law and order.

Intriguingly, the researchers also asked about "stay" factors. Although only four percent of respondents said they came to the city to "lead a better life," once here that seems to encourage migrants to stay. Fourteen percent said the "lack of a better life" discourages them from returning. More significantly, 77 percent cited a lack of jobs as reason for not returning to their village. Yet this reason wanes in a follow-up question: 61 percent said they wanted to stay in the city, even if they did not find a job. The study does not pursue the question of why they would stay, whether it is hope, or whether a job doesn't matter, or whether they are willing to

¹ Bhuyan et al. (2001) provide little detail on the sample selection procedure for their study. In (apparently) 1998, they interviewed about 500 migrants in Dhaka city, all of whom were 15 years old or older and had migrated to Dhaka in the previous 10 years (i.e, since 1988).

sacrifice now for potential future benefits. But the study does indicate that the reasons for coming and for staying may be somewhat different.

Temporality adds another layer of complexity. Not all urban migrants are permanent. Many are temporary migrants that may be seasonal or may have settled in for a long-term stay, with the intention of returning. For example, in some areas as many as 40 percent of rural dwellers look for work in a neighboring town or city during the lean agricultural season or during flooding (Hossain et al. 2003, Afsar and Baker 1999). Finan (2004) finds that temporary migration is a routine livelihood strategy for the poor in Southeast Bangladesh, but it has little ability to lift the household out of poverty. Rather, it is a coping strategy that seemingly “keeps the wolves at bay.”

From an urban perspective, although this may help rural households cope with lack of year-round employment, seasonal migration can harm the livelihoods of the urban poor, who now must compete with these temporary migrants for jobs at the same time as food prices increase, as seen anecdotally in the CARE-IFPRI livelihoods study in Dinajpur town. Other migrants ultimately return to the village because of obligations to their parents or because they have left their spouses and children behind or because they need to maintain property. Kuhn (2003), for example, found that at the end of a 12-year period, 62 percent of those who had migrated from one village in 1982-84 had returned, generally because they had “ended” their time of remitting income or to care for elderly parents. Some households (usually those with more than one adult male member) send just one member to the urban areas (Hossain 2001), as part of a risk-reduction strategy for household livelihoods.

Women and the Ready-Made Garment Sector

As noted, more and more women are migrating, either independently or as part of a household. The increasing migration of women is partially a result of the growing demand by industry. Although most women still do not work in the ready-made garment (RMG) sector, analysts have paid great attention to it, as it appears to have pushed the shift from home-based to market-oriented activities (Afsar 2000c). Statistics bear out this shift.

In 1974, the agricultural and community and personal service (such as social workers and health educators) sectors absorbed more than 80 percent of female labor. While women’s participation in agriculture has increased from 2 to 10 percent in the past ten years (Loretta Payne, personal communication), a shift has occurred in the distribution of the labor force. Manufacturing and services have now emerged as important sectors for women’s work, and relative participation in agriculture has declined. The RMG sector went from 2 percent of female labor in 1981-82 to 30 percent in 1997-98.

Ninety percent of workers in RMG are migrants from rural areas, and 70 percent of them are women (Afsar 2003b, Afsar 2003c). Many of these women are from functionally landless rural households. The environment in which they have grown up is one where purdah is common, sex stereotyping is strong, and work opportunities are scarce. In an urban environment, where they earn money, younger women delay marriage, and defy purdah and norms of sexual segregation. In this way, they gain a degree of autonomy, although many still carry out traditional household responsibilities and are the victims of domestic abuse. In contrast to perceptions that a high proportion of these workers are young, single girls, Afsar (2003c) finds that three-quarters of female RMG migrants live in their own nuclear families or belong to an extended family.

Discrimination in jobs also still exists. Women have lower-skilled and lower-paying jobs than men, with almost all women starting as unskilled production workers while one in seven men starts as a supervisor or technician. Although this may initially be due to lack of education or skills, further studies should examine the employment in the factories to monitor working conditions and to see if women benefit from catch-up training or promotional opportunities. Some change does seem to be occurring: women are now involved in ironing, a more-skilled job in which few women were involved in the early 1990s (Afsar 2003c).

Despite these negative aspects, urban jobs provide many women with previously unthinkable independence and an opportunity to earn money. This has encouraged greater independence, and women have increasingly assumed the role of breadwinner. In fact, 42 percent of these female workers think of themselves as the breadwinner of the family (as do 55 percent of the male workers) (Afsar 2003c). In this sense, even though most women do not work in the RMG sector, the RMG sector may successfully open up avenues for social, cultural, and economic transformation.

Pulled and Pushed: Two Identifiable Streams of Success and Failure?

Although migrants can be categorized many ways, for policy purposes, two streams seem particularly important: those who are pushed and those who are pulled. The poorest generally have to move because they have no options left to them. Households with few resources, such as the uneducated and unskilled landless, attempt permanent migration to find employment. Hossain (2003) in his village study, for instance, found that those with the highest rates of migration were men aged 20 to 40, and people over 60, who went to the cities to beg.

Kuhn (2000) found that family migration occurred more often among the landless than among those with land. While those with land seemed to be able to manage the periodic rain and flooding, even when it damaged their property, over time landless households could not manage the follow-on effects. They appeared to have little ability to manage risk across activities and were isolated from traditional social ties and security arrangements, such as sharecropping and credit (Kuhn 2000).

Those with resources may perceive migration differently. They go because educational or known job opportunities pull them. In contrast to other studies, Hossain (2001), for instance, found that those who had more than 50 decimals of land actually migrated more often than those with smaller bits of land (6-50 decimals). Apparently, those with greater resources (and perhaps greater involvement in non-farm activities) may be able to get jobs in urban areas and spread their livelihoods and risk over the urban and rural space. The landless may have no choice but to shift their whole livelihood base to the urban area. Those who know only farming may have few skills directly useable in urban areas, and so may find the transition to urban life difficult

This grouping of those with and those without "resources" carries over to probability of success in migration. Migrants can face problems in finding accommodations, a job, or even someone they can trust to take money home for them (Hossain 2003). Those who have contacts in urban areas who can ease these challenges can help support the transition. Human and social capital, especially social linkages, become more important than wealth or land. Hossain (2003), for instance, observes that some individuals mediate contacts in both village and cities. Kuhn (2003) calls these individuals "gatekeepers".

The gatekeeper is a new urban patron to whom the migrant owes a debt. New migrants then form networks and dependencies on these gatekeepers, and contribute to a pool of people who share allegiances and social contacts useful for maintaining village and cultural identities, economic support systems, physical protection and political affiliations (Portes 1996). Upon arrival, *mastaans* can also fulfill many of the same roles (Opel 2000). Cultural familiarity and social allegiances are imposed on existing family ties. In a variation on Kuhn (2000), we can say that knowledge trumps the traditional rural power-levers of land and lineage and becomes the currency of urban patronage.

But what about those without these ties? As Lomitz (1977) noted, the truly poor and vulnerable have few resources with which to build networks of mutual assistance. They have little to offer gatekeepers in return for their assistance. At the same time, they have little incentive to stay in an area. In this case, migration is an outcome of weakness, as opposed to the strength, of urban-rural ties. Families will move from rural areas and then focus on building ties in their new urban location. They have nothing to keep them in the rural areas, and nothing to return to. But they also lack the assistance of a gatekeeper.

Migration is not risk-free or costless. Connections and resources are useful to reduce risks and smooth the transition (Feldman 1999). In Afsar's study (2003b), three of five migrants found work within a week of arrival. One-third of them had information about their new job prior to arrival, and three-fourths of them got jobs with the help of social networks. But, consonant with the two-streams hypothesis, this means that one-fourth of Afsar's sample did not have the support of a network. And Hossain (2003) found that over half of migrants found jobs on their own. Finan (2004) notes that debt is an important element of migration strategies, both as a motive for migration and as an enabler. The burden of debt may encourage households to send members out to look for work. In possibility of improving livelihoods by migration can cause households to incur debts to secure resources to move, especially outside the country. The impact on social connections and the conditions of the loan in these situations remain to be explored.

The social contacts of migrants do appear to give them an advantage. Hossain et al. (1999) estimated that the unemployment rate for migrants was only four percent, half that of the non-migrants in the area. They also found that in slum areas where the migrants had settled, moderate poverty stood at 79 percent in 1991, compared to 49 percent in 1998. Afsar (2003c) found that garment workers went from having no income of their own before migration to a situation where now more than 80 percent earn enough to put them above the poverty threshold.

Bhuyan et al. (2001) found that, when employed, migrants have higher incomes and expenditures and better housing and receive better health care, sanitation services, and education for their children than residents already at the destination. Hossain et al. (1999) suggest, however, that the advantage of these migrants may decline over time, and that ultimately they struggle just as non-migrants do.

These findings thus challenge the notion that rural-urban migration simply transfers rural poverty to urban areas. The situation is obviously more complex. New migrants may in fact have contacts and opportunities that enable them to move out of poverty fairly quickly, or maybe avoid poverty altogether. On the other hand, the 2001 HIES indicated that urban poverty has increased in Bangladesh for the first time, even as rural poverty continues to decline.

The researchers also asked about what conditions would motivate urban migrants to return to their villages. Ninety percent of respondents said the establishment of new industries and new job opportunities. They then cited other factors like road improvement, employment of new agricultural technologies, and education, health care, housing, and sanitation.

This analysis helps to explain why migrants come to the city, and why they stay, with or without networks, and in miserable conditions. If rural dwellers migrate to be able to go to school, or because they have no job, why would they return, even if the living conditions are worse than in the countryside?

This quickly raises the question about what happens to those who are left behind, and are there two streams there too? Is there increasing inequity among those who are left behind involuntarily, with few resources and skills, and those who stay because they have the skills and resources to make a good rural living?

Mutual Assistance and Remittances

Contacts in urban and rural areas are important for both migrants and their families who remain in the villages (Afsar 2003b). In Bhuyan et al's (2001) study, 88 percent of migrants visit the village occasionally to meet with family and 24 percent go to look after their property (which also maintains the tie). Rahman et al. (1996) found that 20 percent of households had migrant members who lived away from their families but got assistance from them at times and also provided assistance to them. Temporary as well as permanent migrants, and married and unmarried individuals, send and receive assistance (Kuhn 2000). Although Kuhn (2000) found that most remittance income is used for consumption, not investment in productive activities, he also found it can be a substantial aid. In his review of studies, for those households with members in urban areas or abroad, remittances were often at least one-fifth and frequently up to one-third of total rural household income.

Social, Political, and Economic Change

Information on the wide social, political, and economic consequences of migration are scarce (Afsar 2003b). No available studies calculate the cost and benefits for individuals and households. For example, studies should analyze the impact of those who leave the areas, with their intellectual, social and perhaps financial capital, on those who remain. Few studies analyze the impacts of remittances on households and the wider rural economy, or analyze the contributions of migrants to the urban economy, or the costs they impose. .

The greater flows of information that accompany migration influence broader changes in society as well. With greater connections to urban areas, and perhaps increasingly busy days and less time to spend preparing meals, dietary patterns can change in rural areas to mirror urban ones. Additional freedoms for women common in urban areas may ultimately influence rural mores. Of course, rural migrants can bring their social customs with them. Bhuyan et al. (2001) found that among urban residents 40 percent still conducted child marriages, and 25 percent still followed purdah.

Key Issues and Issues for Research

This section has highlighted some critical issues for better understanding the causes and effects of movements of people in Bangladesh between urban and rural areas. But has the urban-rural lens brought forth any new perspectives? If migration is only one-off, with no reverberations, then the urban-rural lens is only minimally useful: Moving from one place to the other is part of the transformation, but historical. Key questions would revolve only around how to manage the transition.

Yet, migration is not a one-off event. And it resonates in both rural and urban areas. Thus, we need to look at the causes and the effects of migration, and the continuing nature and effects of links to rural areas. These links are not just individual but have general economic consequences. Migration represents a movement of economic resources, and of human, social, and financial capital, not just of disembodied "people."

An example from Kuhn (2000) illustrates the importance of understanding the dynamics of migration for understanding the dynamics of livelihoods. In his study site of Matlab thana, about 6 hours from Dhaka and Chittagong, outmigration to urban areas reversed 40 percent of the population growth that Matlab would have otherwise experienced between 1982 and 1996. Analysis that failed to consider migration as part of rural livelihoods in Matlab would have looked at overall growth, and missed the influence of migration on the statistics. The need for policies and planning to address the growth of Matlab, its high fertility and its low mortality rates and its high rate of outmigration, would have been missed.

Data about flows and causes

Unfortunately, the available figures on internal migration are sketchy and do not shed consistent light on migration patterns in Bangladesh. Without these, it is difficult to establish a solid basis for migration or rural-urban development policies. It would seem absolutely essential to have a survey of individuals and households at the origin (whether urban or rural). Improved utilization of DHS, Census, and HIES data, and addition of a migration module, would help. Improved quality among some of the statistics currently gathered would also help.

- Who migrates? At what rate?
- Why do households and individuals migrate? Why do households and individuals stay?
- How many people does each cause affect?
- What would therefore be the most cost-effective investment or policies to stem or to benefit from this migration?
- Are there regional variations -- and so a need for different policies and programs in each region?
- Do these streams of migrants change over time? Why?
- Where do migrants move? And what is their trajectory over time, in terms of social and income mobility, and location?
- How does migration affect poverty reduction?

Forces of Migration

Some forces push; some pull. In Bangladesh, the slow growth of agriculture is pushing, and the possibility of jobs and better education in the cities is pulling. A more positive environment for migration would be one that pulls, regardless of location. This means that the benefits that

rural dwellers gain from migration to the cities should be replicated in rural areas (Bhuyan et al. 2001). Although past attempts at deconcentration and at encouraging development of regional growth poles to slow migration have largely not succeeded, we now have general agreement on the reasons why – giving us guidance for future policies (Tacoli and Satterthwaite 2003).

Previous policies focused on deconcentration rather than decentralization. They maintained a sense of institutionalized direction, if not necessarily an urban-based one. Rather than improving and often liberalizing production and market systems, policies maintained government control and made little investment in rural infrastructure and services. Rather than recognizing factors specific to the economy of each region and urban-rural synergies, policies continued to be implemented in a top-down fashion. Local needs were not considered or integrated with national sectoral or macroeconomic policies. While the specific needs of agriculture remained unaddressed, policies aiming to support “growth poles” through industrial development missed the link with the food and agricultural system and were not appropriately designed to support small and medium size enterprises, the backbone of “urban” development in these smaller market towns.

Policies must now evolve to develop farm and non-farm activities, and provide good health care and schools. Rural areas must benefit from better telecommunications, pricing information, diverse agricultural technologies, and justice. Planning documents currently make sifting out this information difficult, as they do not break out investment by urban-rural "sector."

- What is the level of investment in urban and rural "sectors," and in urban and rural areas (by city size and by region)? Is there urban bias?
- Alternatively, what kinds of rural and urban and agricultural and other policies shape these differences? What kinds of policies can enhance patterns of exit and improve the migration experience, by ensuring factors pull rather than push and by improving the sustainability of livelihoods of those who move and of those who are left behind?
- Just as better health and education and more opportunity for jobs pulls migrants to the cities, would investment in rural areas exert a pull, or a "staying" influence, there?
- Would greater attention to rural market development, infrastructure (such as irrigation and credit), delivery of agricultural technologies and other inputs, including credit, and industrialization improve agricultural productivity and enhance agricultural growth, helping to exert a pull influence in rural areas?
- Would greater attention to support of the ability of the landless to access land or acquire skills to join in non-farm activities help?
- Would more roads increase incomes and exert a pull influence, or would they facilitate escape from rural areas?
- What are the probabilities that the push and pull factors will diminish or intensify? What policies or conditions are behind those trends?

Rural and Urban Livelihoods: Interactions and Transformations

Migration is a journey. Policies can focus on three parts of that journey: improving livelihoods at the destination in towns and cities, improving the migration experience, and improving livelihoods at the origin, in rural areas. Currently, an opportunity seems to exist for Bangladesh to support and benefit from a virtuous urban-rural growth cycle based on a dynamic and increasingly diverse agriculture. This involves rural change, and appears to be creating a new modern rural space with greater wealth. Continued investment in infrastructure, especially roads and communications, is bringing rural areas closer and closer to urban areas.

This is a time of genuine transformation and, for many, escape from poverty. Some urban households, especially those who even now are without resources, may not make it. At the same time, wealthier rural folks and those with social networks are moving to the city. As part of a transition, they may temporarily stop off in urban slums or other low-income areas, or they may bind together with other new migrants and invest in new towns that grow into good places to live. Although they live in hazardous conditions, in general they are moving up. On the other hand, poor rural migrants, with no resources and no alternatives, may accompany them, but fall into the same poverty trap as the already-poor urban dwellers. The evidence suggests, then, that there is a churning froth of those who move in and move up, on top of a core set of chronically poor people who live lives of deepening urban poverty.

Given the variation in pushes and pulls, and patterns of migration, generalization of recommendations is difficult. But policies, programs, and policies can provide a general framework, and, based on an understanding of the complexities, can be designed to address the needs of specific groups.

In general:

- How do migration flows affect urban and rural livelihoods? What urban links do these rural migrants establish? What services and resources do they demand and will they need to move ahead?
- What are the costs and benefits to individuals and households that drive migration?
- What are the kinds and effects of links from urban to rural areas -- of remittances, investment, business links, and social and political influences?
- What are the impacts (on a general economic level) of the migration of human and financial capital from rural to urban areas?

In rural areas:

- What happens to those who are left behind in rural areas? Do they become part of a landed elite? Or do they integrate into non-farm activities? Do land tenure laws and restrictions actually inhibit farmers from being able to invest productively and earn a complete living from agriculture? Specifically, how do changes affect the lives and livelihoods of women, and children?
- Are there two streams of increasing inequality -- those who can earn a living from agriculture, and non-farm activities, and others, most probably the landless, who simply cannot make it?
- If the poorest households cannot migrate, does that lead to rural pauperization? With what sort of impact on the rural economy? And with what implications for social programs and policies.
- How do individuals integrate into rural and urban livelihood strategies? And how do they relate to pathways out of poverty over time?
- What are the demographic impacts of migration? Who is left? What are the special impacts on women who may be left behind and alone? What is their scope for generating income? Avoiding harassment? Taking good care of the children, including food, health, and school?
- What is the role and impact of remittances on rural families? Do families send members to urban areas, in order to remit? How are remittances used? Do they help to expand rural agricultural or other productive activities? How significant are they compared to other sources of funds? Do remittance patterns change over time, especially over the lifespan of an individual or household? With what consequences?

In urban areas:

- For migrants, what resources, including infrastructure, need to exist to smooth the transition (such as child care, secure ways to send money home, to find a job, to get skills, find housing in neighborhoods that are safe from crime and threat of eviction) and allow them to escape poverty and, perhaps above all, escape from personal indebtedness to *mastaans* or urban gatekeepers?
- What happens to the livelihood security of migrants over time? If they leave the jobs they initially find, do they find others, better paying, or do they simply become part of the pool of the urban poor?
- Or are some migrants able to use migration to put themselves on a trajectory out of poverty? If so, why? And what is the nature of that path? How can policies and programs help?
- What other institutional needs do recent migrants have, and how can they be addressed?
- Specifically, what are the experiences for women? How do the new challenges of urban work change the nature of the labor market, credit, and home life? What are their trajectories in terms of employment and greater autonomy?
- How does the interaction between urban and rural areas change ideas, political alliances, and social networks and obligations? And does greater political involvement, or the nature of political ties and involvement, have an impact on politics, political choices, and resource allocations? How do the migrants interact with others socially and politically?
- What drives migrants' choices regarding employment, habitat, and community? What urban activities welcome them? What are the barriers to their escape from poverty? Where do they go? What do they do? What contributions do they make? How do they interact socially and politically?
- How does migration, permanent or temporary, affect the livelihoods of urban dwellers, especially the urban poor?

III. Sectoral Interactions: Agriculture in the Rural and Urban Economies

Generally rural areas can be equated with agriculture (or at least exploitation of natural resources, for fishing, forestry, mining, oil drilling or tourism), and urban areas with non-agricultural activities (or at least not with widespread agricultural production and the raising of livestock). In this sense, urban-rural links are spatial, and connect two areas.

In another sense, urban-rural links are intersectoral. The spheres of economic activities of rural and urban populations are becoming less separate. The migration patterns examined in the previous section are clear evidence of changes in the farm economy and of improvements in communications and infrastructure. Labor can now flow more freely across geographical areas. Rural populations can earn a substantial part of their income from activities other than agricultural production. And urban dwellers may earn their principal income, or simply augment it, from agriculture, as do many urban residents in Colombia during the coffee harvest (Hataya 1992).

This section describes these intersectoral interactions in Bangladesh, the expansion of rural livelihoods to include and often rely on economic activities other than agricultural production. Usually discussion revolves around “ag” and “non-ag” activities, or “farm” and “non” or “off-farm”. Some clarification of terms is needed, however. The terms “non-ag” or “of-farm” can lead to an underestimate of the importance of agriculture. “Non-ag” or “off-farm” activities may actually be closely related to agriculture, such as processing or transporting. Other “non-ag” activities may not be, such as non-food retail or small manufacturing. Simply saying “non-ag” or “off-farm” precludes an understanding of how agriculture remains critical to the success of these livelihoods. Many activities, for example, are elements of the food-value chain that are essential to develop if the rural economy is to thrive by adding value to the raw product and, commensurately, add jobs for rural dwellers, especially the landless.

Once we acknowledge that livelihoods span an urban-rural divide, the spatial restrictions that most agricultural analysts and development practitioners apply to these terms -- that they apply only to *rural* livelihoods -- become problematic. Households cross sectors and space in earning their livelihoods. With their “non-agricultural” activities, rural livelihoods now extend off-farm and to urban areas. And urban households extend into rural areas, but the use of these terms is not generally helpful for discussing what they do. The great majority of these activities are “non-agricultural” and all are “off-farm,” even if they involve agricultural production in an urban area. This analytic categorization becomes useless as it fails to distinguish among job types or the sectors that drive employment.

This paper does not go further in this reconceptualization, but it does split the discussion of sectoral interactions into rural and urban space, and the section should be read with the noted caveats in mind. Analysts, practitioners, and policymakers should be clear when they are talking about *agricultural production* and when they are talking about separate but related components of the *agricultural and food system*, for which agriculture (and forestry, livestock, and fisheries) is the productive base. By investigating the significance of these separate components, we can more clearly understand how rural livelihoods relate to agriculture and the agriculture and food system, or, instead, to genuinely non-agricultural enterprises. Simplistic use of the terms “ag” and “non-ag” or “farm” and “off-farm” does not get us very far in that discussion.

Agriculture and the Rural Non-Farm Sector

Agriculture and the rural economy in Bangladesh have undergone a process of reform and structural changes in recent years. The country embraced a process of economic reform in the 1980s under the auspices of the Washington Consensus. As a part of the overall reform agenda, it embraced the liberalization of agriculture inputs (irrigation equipment, for instance) and outputs (rice imports, for example). Looking at the subsequent performance of the farm sector in terms of mechanization (irrigation), technology adoption (high-yielding varieties), and agricultural exports (rice and vegetables), it is evident that the reforms have helped the development of the sector. As we will see later, there were also significant structural changes within agriculture.

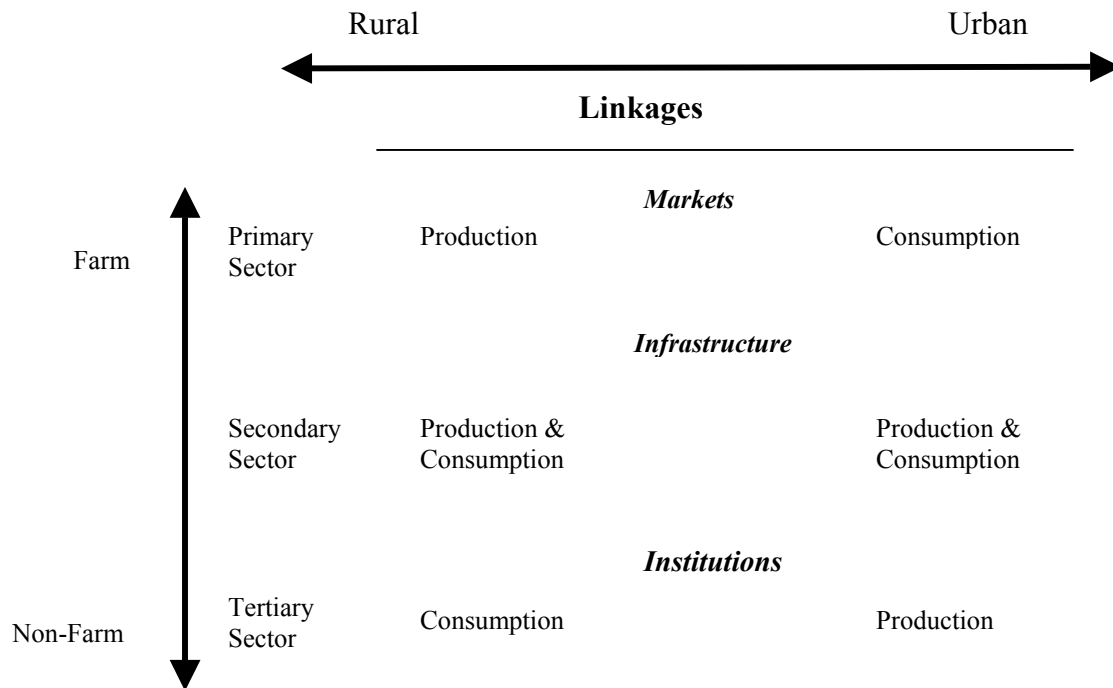
In the case of the rural economy, the classic rural-urban duality and severe imperfections of rural markets have been steadily disappearing in Bangladesh. With few exceptions, rural areas are increasingly integrated with urban areas through physical infrastructure and communications, and markets and institutions. Therefore, the idea of an agriculturally driven, isolated regional growth pool (e.g., Hazell and Ramasamy 1991) in the present context of Bangladesh may not apply.

In the past years, instead of agriculture-driven rural growth, Bangladesh has been experiencing non-farm driven rural growth. Especially in the 1990s, growth in rural household income was primarily driven by the non-farm sector. In fact, the growing importance of the non-farm sector in rural household income can be found across continents. In Latin America and South Asia, the non-farm sector contributes 30 to 40 percent of rural household income. In Sub-Saharan Africa, the contribution is even higher, accounting to 40 to 50 percent of rural household income (Start 2001).

The non-farm sector offers two possibilities: first, a two-way linkage between farm and non-farm sectors across a country, and second, a bridge between urban and rural areas within a region. The non-farm sector also offers overall development possibilities both for a region and for a country. It can provide employment opportunities for a growing labor force, promote growth and equitable income distribution, and contribute to poverty alleviation (Islam 1997).

For the sake of simplicity, both farm non-farm sector and rural-urban location can be diagrammatically presented. Figure 1 depicts the rural-urban continuum and places the farm and non-farm sector in that continuum. Activities divided further into primary, secondary and tertiary sectors have sectoral as well as spatial dimensions. While primary activities such as crop production are located in rural areas and linkages to urban areas are through consumption demand, secondary activities such as processing and packaging activities can be located both in urban or in rural areas and can have both production and consumption linkages. In contrast to primary activities, tertiary activities such as trade and transportation dominate urban areas, and link urban areas with rural areas through consumption demand.

Figure 1: Rural-Urban Linkages in Farm and Non-Farm Sectors



Given the spatial and sectoral nature of the urban-rural continuum and farm/non-farm linkages there, the primary means of ensuring that production and consumption demands are met are markets, infrastructure, and institutions. Whether the urban-rural dichotomy reported in the development literature in 1950s and 1960s continues or it disappears depends largely on how markets in urban and rural areas are integrated with each other, how efficiently goods and services move spatially, how efficient the information dissemination process is, and how efficient formal and informal institutions are.

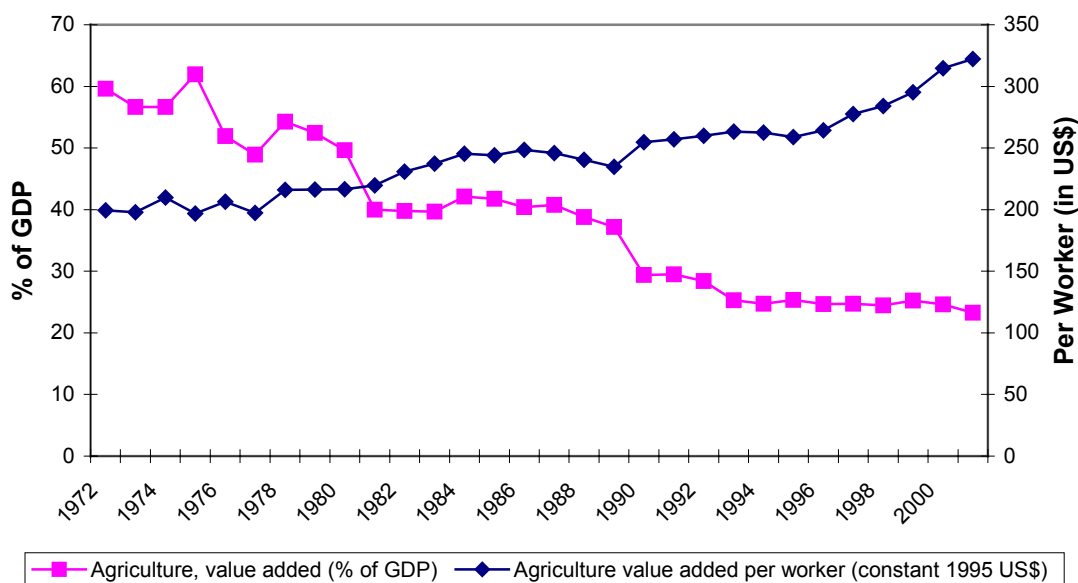
In the remainder of this section, we review the farm sector and identify the trends and the sub-sectors within the farm sector that have future growth potential for income and employment, especially for women and landless households. We look at the non-farm sector, which has strong connections with urban areas and has been emerging as a major source of livelihoods for rural as well as urban households. We review the emerging modern food-value chain recently pioneered by private food processors and supermarkets. This is followed by a description of the issue of infrastructures, markets and institutions in the context of rural-urban linkages. We conclude by identifying key issues that exist and research gaps that require further attention.

Farm Sector

During the last three decades, there has been a significant structural change in agriculture in Bangladesh both in terms of its contribution to national economy and employment. As can be seen from Figure 2, agricultural value added as a percentage of Gross Domestic Product (GDP) declined from around 60 percent in 1972 to around 50 percent in 1980. The decline was relatively slow in the 1980s but continued. By 1990 the relative share of agriculture reached 29 percent. By 2001, the agricultural share to GDP had declined to 23 percent. In comparison with

neighboring countries, the South Asian average, and other developing countries, the decline of agriculture in Bangladesh was relatively rapid. Figure 3 provides a regional comparison.

Figure 2: Agriculture Value Added (% of GDP) and Per Worker (US\$)

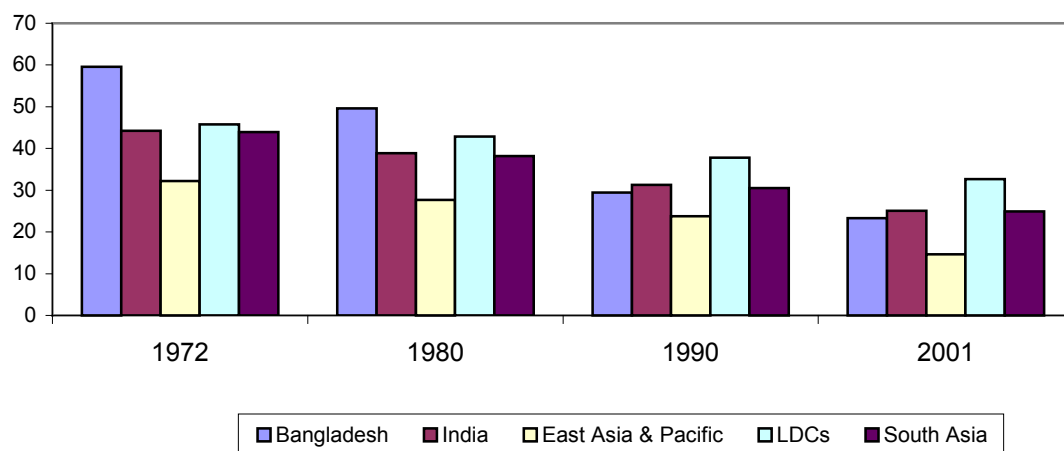


Source: WDI 2004

However, the relative decline of agriculture in national GDP has not happened due to a decline in agricultural value. As can be seen from Figure 2, the agriculture value-added per worker increased from around US\$200 in 1972 (in constant 1995 US dollars) to around US\$216 in 1980 and further still to around US\$255 in 1990.

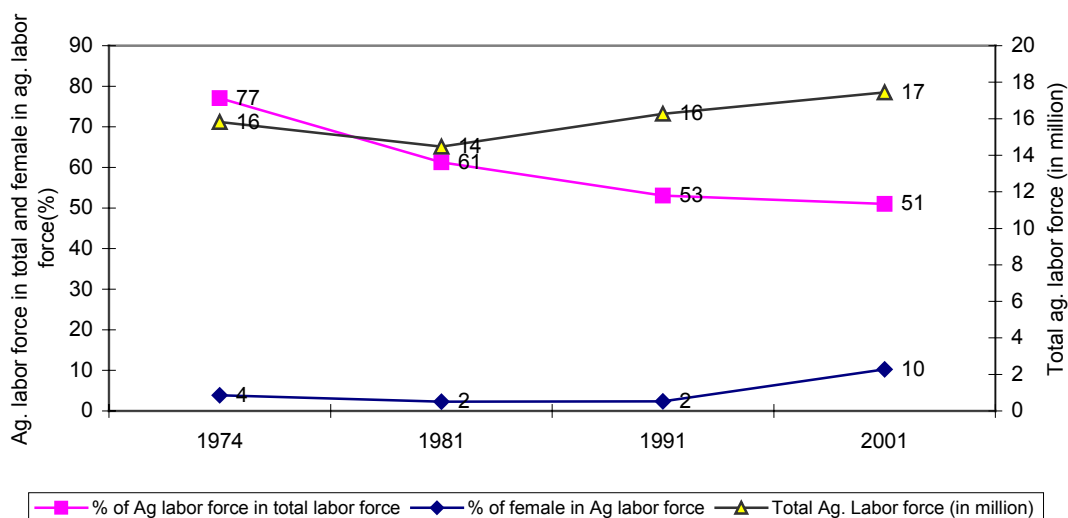
Compared to countries with a similar level of income, such as India, and other South Asian countries, agriculture in Bangladesh had performed reasonably well. During the periods 1972-80, 1981-90 and 1991-2001, the average growth in agricultural value added per worker per annum was 1.3 percent, 0.94 percent and 2.18 percent, respectively. During the same period, the average growth in agricultural value added per worker in India was 0.07 percent, 2.49 percent, and 1.56 percent, respectively.

Figure 3: Agriculture, Value Added (% of GDP), 1972-2000



Source: WDI 2004.

Figure 4: Agriculture Labor Force, 1974-2001



Source: BBS 2003. Population Census 2001

Figure 4 shows the agricultural labor force as a percentage of the total labor force, women as a percentage of the agricultural labor force, and the total agricultural labor force. Unlike agricultural GDP, the share of agricultural employment in total employment declined much more slowly, from 77 percent in 1974 to 61 percent in 1981 and to 53 percent in 1991. In the 1990s, the decline was relatively slower compared to the previous two decades. However, despite a reduced role, the absolute number of workers employed in agriculture continued to grow and the share of agriculture in total employment remained above 50 percent in 2001. Therefore,

agriculture remains the major source of rural employment in Bangladesh. Given the sizeable growth in value addition per worker in agriculture (Figure 1) particularly in the 1990s, the increased employment in agriculture may have been accompanied by an increase in real wages and an improvement in the livelihoods of agricultural workers.

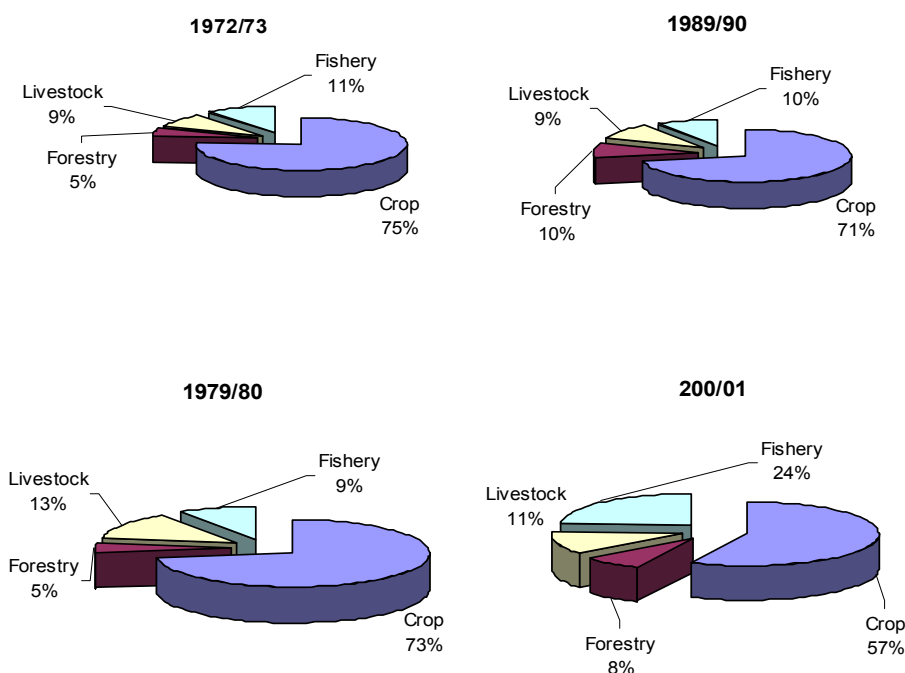
Employment in agriculture also remained an important source of women's employment. In fact, during the last decade, there was a feminization of the agricultural labor force in Bangladesh, as the share of women in the agricultural labor force increased relatively rapidly. Though it might seem a positive development, this raises new questions that need to be answered: In which particular sub-sector women are getting into? Are the jobs residual in nature?

Mallorie (2003) gives a detailed review of the role of women in agriculture and rural livelihoods. The major changes in women's roles in recent years seem to be primarily an across-the-board increase in women's participation in the agricultural labor force, yet with men still dominating in fieldwork and women becoming more involved in preparation and post-harvest activities. Women dominate in homestead vegetable production and livestock raising. Men largely control market activities, although this is slowly changing.

As we will see later, compared to the non-farm sector, productivity growth is lower in the farm sector, and within the farm sector there are productivity divergences. Therefore, it is important to understand if women are getting employment opportunities in low-productivity jobs, rather than high-productivity jobs, from which men have decided to exit.

Within the different sub-sectors of agriculture, there has also been a change in output composition. Figure 5 shows the contribution of different sub-sectors within agriculture. Among the four sub-sectors – crop, livestock, fisheries and forestry – it is the crop sub-sector that has experienced the greatest decline. While the crop sub-sector contributed more than 71 percent of agricultural GDP in 1972/73, its contribution declined to 57 percent in 2000/01.

Figure 5: Share of Different Sub-Sectors Within Agriculture, 1972-2001



Source: BBS, Various issues

The relative contribution of the crops sub-sector has declined from 75 percent in 1972-73 to 57 percent in 2000-01. The fisheries sub-sector has increased substantially, from 11 percent to 24 percent in the same period. The contributions of the livestock and the forestry sector have hovered around 10 to 15 percent and 5 to 10 percent, respectively.

During the period 1972 to 2001, the contribution of non-crop high-value products - including livestock, fisheries and forestry - increased from around 24 percent to 43 percent. In fact, in the 1990s, the increased contribution of agriculture in national GDP came primarily from the non-crop sub-sectors while the crop sub-sector continued to decline. The contribution of fisheries to the increased agricultural GDP was followed by the contribution of livestock and forestry. These sub-sectors have strong links to the growth of non-farm sector in Bangladesh and in the emergence of modern food value chain, as we will see later.

To summarize, there is a declining role of agriculture in national GDP and of the crop sub-sector within agriculture and rural livelihoods. Due to the low employment elasticity of crop production, mechanization, the declining amount of land under crop cultivation, and low expenditure elasticity of cereals (Engel's law and Schultz effect), future growth in agricultural production. Bangladesh will not create enough demand to absorb the growing rural labor supply. Therefore, non-crop sectors in agriculture such as fisheries and livestock, and the non-farm sector in rural areas and in rural-urban interfaces will become increasingly important in rural income and employment creation.

Non-farm Sector

As mentioned above, there are definitional difficulties both in defining rural and in defining non-farm activities, and no unique definition is available for inter-temporal or interspatial comparison. In a few cases, all non-crop sector activities, such as forestry, fishery, and livestock, are considered non-farm (Lanjouw and Lanjouw 1995). In other cases, non-farm activities include secondary and tertiary activities only. This definitional problem underscores the point made in the introduction. Discussions about “non-farm” or “non-agricultural” actually exclude only agricultural, maybe even only crop, production. The term “non-farm” can include both activities very closely related to agricultural production, such as non-crop activities or processing, as well as other activities, such as non-food retail marketing, that have nothing to do with agriculture.

This section will stick to a definition for “non-farm activities” used in Hossain (2002) in the Bangladesh context that *includes* secondary and tertiary activities². Table 2 shows the income from the farm and non-farm sectors between 1987/88 and 2000/01 based on a nationally representative survey. In contrast to the farm sector where income grew at a rate of 1.4 percent per year from 1987 to 2000, income from the non-farm sector grew at a rate of 6.8 percent per year during the same period. Not only has the non-farm sector grown at a very impressive rate, its contribution also has increased to above 50 percent of total rural household income. Therefore, it is the non-farm sector that is the most important source of rural household income. If we include non-crop agriculture as part of the non-farm sector (following Lanjouw and Lanjouw 1995), the total contribution of the non-farm sector reaches 65 percent of rural household income.

It is important to note that the divergence in the growth rate between the farm and the non-farm sector has happened due to two reasons: first, the relatively poor performance of the crop sub-sector within the farm sector; second, a sharp reduction in labor income in the farm sector as a source of household income. This confirms the view that the crop sector in Bangladesh will not be able to absorb the future growth in the rural labor force. In contrast to crop agriculture, non-crop agriculture that has a strong link with non-farm sector and urban areas grew at a rate comparable to non-farm growth.

² Hossain (2002) follows a narrow definition of rural non-farm (RNF) activities. These include activities outside agriculture that includes livestock, fisheries and forestry. Three types of activities that he mentioned under RNF activities are: (a) Manual labor based activities such as self-employed subsistence-oriented cottage industries, wage employment in rural business enterprises, transport operation, and construction labor; (b) Human capital based occupations, such as salaried service in public and private organizations, teachers and imams, village doctors, and various types of personal services; and (c) Physical and human capital intensive activities, such as commercial type rural industries, including agro-processing, shop-keeping, peddling, petty trading, medium and large scale trading, and contractor services.

Table 2: Income from Farm and Non-Farm Sector, 1987/88-2000/01

	1987/88	2000/01	Growth (% per year)
Average Household Income (in US\$)	950	1503	3.8
Share of Farm Sector (in %)			
Crop	46.4	31.0	0.4
Non-crop agriculture	7.7	13.3	8.3
Labor	10.3	4	-3.8
Total Share of farm sector (in %)	64.4	48.3	1.4
Share of Non-Farm Sector (in %)			
Trade and commerce	14.5	21.7	7
Services	15.9	22.1	6.5
Labor	5.2	8.3	7.5
Total share of non-farm sector (in %)	35.6	51.7	6.8

Source: Hossain (2002)

Hossain (2002) reported that the rural non-farm sector employed 52 percent of the rural workforce in 2000-01 and contributed an equal amount of income. It also acted as a major source of employment in rural areas for women since it employed more than half (54 percent in 1995/96) of the employed female labor force in rural areas (Mahmud 1996). Between 1987 and 2000, average trade and business enterprises contributed 22 percent of rural non-farm employment, with nearly 60 percent of these enterprises agriculture-related (Hossain et al. 2002).

Although we cannot make direct comparisons due to different time periods and coverage of the surveys used, these figures mirror those of Afsar (2003c), who also notes that agriculture has declined as a source of household income. In her study, income from agricultural production declined from 59 percent to 44 percent of income from 1987 to 2000. Income from trade, services, and remittances increased from 35 percent to 49 percent in that period. The percentage of households receiving remittances also increased, from 11 percent in 1987 to 21 percent in 2000, implying not only diversification of income sources but also more prevalent links with urban or foreign destinations.

The non-farm sector not only helps to create employment, but the employment it does provide can be highly productive as well. For instance, according to Varma and Kumar (1996), with few exceptions, labor productivity in rural non-farm manufacturing is considerably higher than that in cottage industries. According to Hossain (2002), the average productivity in the non-farm sector was 40 to 50 percent higher than the farm sector.

With an increase in non-farm activities in rural areas, large and medium farmers are leaving farming, and landless households are filling their vacuum as tenants (Hossain 2002). While farming gives a livelihood opportunity for landless households that was not previously available to them, these households are not participating in the more rewarding non-farming sector.

What barriers prevent women and the landless from entering this more lucrative non-farm sector are not well understood yet. According to Hossain (2002), schooling is one of the important determinants of occupational mobility from the farm to the non-farm sector. However, we do not

know what is the minimum level of schooling needed to make this occupational shift, and what are the complementary factors required to enter the non-farm sector.

Given the unprecedented growth achieved in the non-farm sector during the last decade, what are the factors that contributed to that growth? There have been some attempts to determine the factors that contributed to the growth of the non-farm sector in Bangladesh. According to Mandal and Asaduzzaman (2002), the recent growth in the non-farm sector is actually led by both crop and non-crop agriculture. Additional factors that they identified are microcredit, rural remittances, and the development of physical infrastructure.

However, we question the conclusions drawn in Mandal and Asaduzzaman (2002). First, given the dismal performance of crop agriculture over the same period (contributing only 0.4 percent of rural household income growth; see Hossain 2002), it is very unlikely that crop agriculture acted as a driver of non-farm growth that then contributed to income growth of 7 percent. In fact, Toufique (2002) argued that the growth in the farm sector is less relevant for the growth of the high-end non-farm sector in rural areas.

Second, despite an arguably positive role of microcredit in poverty alleviation in Bangladesh (Pitt and Khandker 1998), it does not appear to be the major credit source for non-farm enterprises in rural areas in Bangladesh. Based on survey findings reported in Hossain (2002), it can be seen that with the exceptions of agro-processing and forestry, microcredit contributed 5 percent or less to the business capital of non-farm enterprises. Therefore, analysis needs to go beyond the traditional sectoral link (farm / non-farm) and add spatial as well as institutional and other links.

Bridging Sectoral and Spatial Gaps: Food value chain

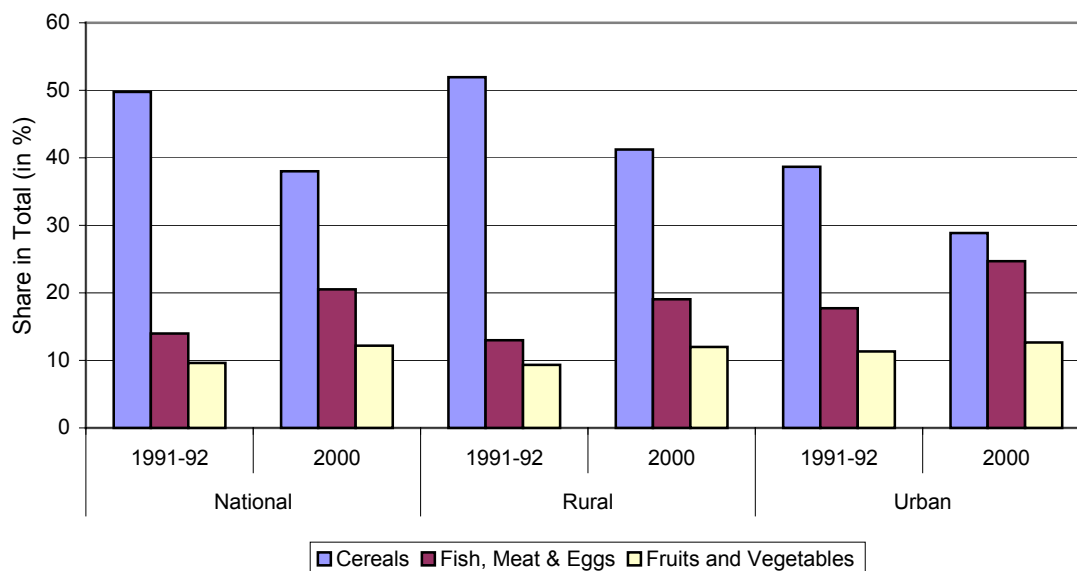
One of the missing explanations in the growth of non-farm sector and the growth of selected farm sub-sectors such as livestock and fisheries can be found in the development of the modern food value chain. Private sector agro-processors in Bangladesh, such as Aftab Group and Praan Group, and supermarket chains, such as Agora and Nandon, are beginning to pioneer this contribution in Bangladesh.

As opposed to the traditional value chain where village middlemen collect products from farmers, sell to larger middlemen in nearby towns, and then send products to wholesale markets in cities where small retailers buy and then finally sell to consumers, the modern food value chain is highly coordinated from farms to firms. In a modern food value chain, food processors such as Praan Group contract farmers directly, provide technical assistance and collect their produce from farms. Similarly, supermarkets that are emerging in urban areas, particularly in Dhaka, follow a similarly highly coordinated food value chain.

One of the important reasons behind the emergence of a modern food value chain is the change in the dietary composition of urban consumers in favor of high value products such as fish and meat, and fresh fruits and vegetables. Figure 6 shows the dietary composition of cereals and high value foods as a percentage of total monthly expenditure on food for 1991-92 and 2000. As expected, there was a visible shift of food expenditure in favor of high value foods at the national level and also in urban as well as in rural areas. Note that this shift was accompanied by an increase in total food expenditure. Therefore, the change in demand, particularly of urban demand, is expected to influence the production of high-value products positively. In addition, urban residents tend to spend greater amounts on all categories of food (other than staples) than rural residents, and the difference in expenditure is especially large in

the case of fish, meat and eggs. Therefore, any increase in income would imply that the aggregate demand for these high value foods will increase.

Figure 6: Share of Food Expenditure By Major Food Items



Data Source: BBS 2003.

Unlike many other activities such as mechanized transportation that requires a large amount of capital, production of high-value agricultural products such as fruits and vegetables do not have a high capital requirement. Minot (1986) argues that small-scale production of many high-value commercial crops, such as fruits and vegetables, can be competitive with large-scale production. This implies that there may not be any economies of scale involved in the production of many high value crops to act as a constraint to small-scale farmers. Therefore, the emergence of the modern food value chain offers a new opportunity for poor rural households to improve their livelihoods by connecting with urban demand.

Since this food value chain stretches from rural to urban regions, there is scope for the inclusion of producers as well as other intermediaries. Many of the rural non-farm activities, such as food grading and food processing, can add significant value to this chain and can offer new livelihood opportunities for landless households and women. Some activities such as food sorting, grading and packaging can offer permanent employment opportunities, particularly for women.

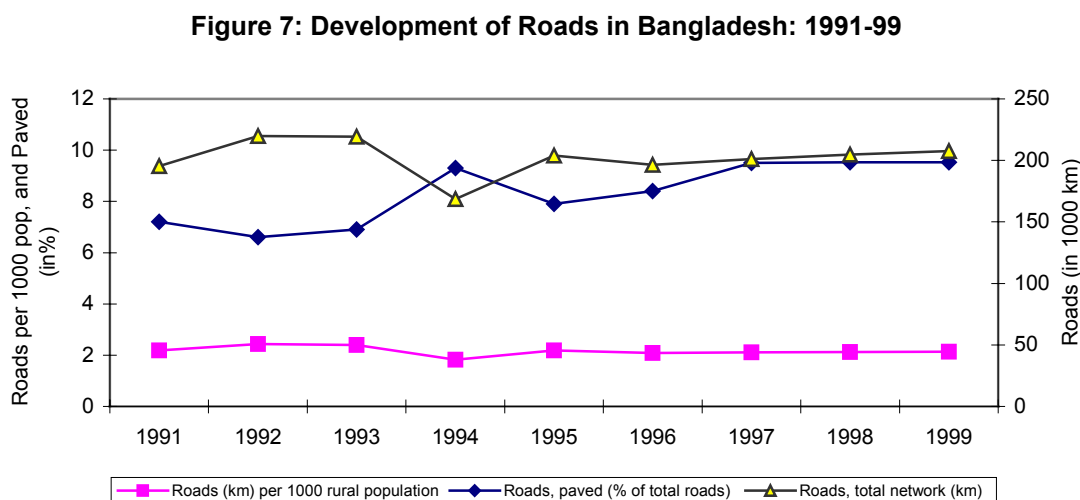
Part of the modern food value chain emerging in Bangladesh goes beyond rural-urban linkages and integrates rural producers with global markets (Toufique and Turton 2002). There are public and private as well as NGO initiatives that are noteworthy to mention. For instance, the public initiative under the Hortex component of the Agricultural Services and Reform Project has helped to connect horticulture producers to the export market. Similarly, BRAC has recently developed contract growers and started to export vegetables to European markets (Bayes and Ahmed 2003). Similarly Praan Group, a large agro-processing firm has developed contract growers in fruit production.

Bridging the Rural-Urban Divide: Infrastructure, Market and Institutions

Infrastructure provides the bridge between rural and urban areas and creates a rural-urban continuum. By ensuring goods and services move efficiently and effortlessly, it ensures higher prices for producers and lower prices for consumers. Integration between rural and urban areas can bring previously spatially divided markets into a single market. Development of markets in rural areas ensures that products produced are sold, creating further opportunity for farm and non-farm growth. Institutions that govern rural markets need to update and change once integrated into the rural-urban continuum.

The rural development strategy prepared by the Bangladesh Government in 1984 served as a basis for the subsequent development of rural physical infrastructure and markets (roads, markets, storage facilities, electricity, and minor irrigation). Figure 7 shows the development of rural roads during the last decade. Three indicators shown in the figure are roads (km) per 1000 rural population, paved roads as a percent of total roads, and the total road network (in km). While the first one captures the access of the rural population to physical infrastructure, the second one captures the quality of physical infrastructure. The third indicator captures the overall development of roads in Bangladesh.

Figure 7: Development of Roads in Bangladesh: 1991-99



Source: Data from WDI 2004.

It is obvious from Figure 7 that despite the positive role of physical infrastructure in non-farm growth in the 1990s reported in Mandal and Asaduzzaman (2002), access to roads has not shown any significant improvement. Though some improvements have been achieved in road quality, access to rural roads and the total road network have not experienced any dramatic increase. The total network has hovered around 200,000 kilometers during the 1990s.

We have not found any micro-level studies specifically examining the role of physical infrastructure in farm and non-farm development and in urban and rural linkages. Limited evidence available at the district level in Bangladesh shows a statistically significant positive relation between agricultural output and rural roads and growth centers. There is also evidence that rural road development is a critical factor in farm and non-farm employment, especially of the rural poor and of women (World Bank 1996).

However, physical infrastructure provision in Bangladesh, from planning to implementation, is a highly centralized process. There is hardly any participation of rural households and communities either in infrastructure planning or in expressing their need for infrastructure. Therefore, the entire planning process is centralized and supply-driven with little or no consideration of actual demand or needs of the rural population. Nor is there any effort to mobilize local resources for infrastructure development and private sector investment. The current administrative process has little room for decentralization and local resource mobilization.

Until recently, with some important exceptions, the issue of women in infrastructure planning has been neglected (Cashin and Musillo 2001). Rural infrastructure projects do often offer employment opportunities for poor women, and CARE's Rural Maintenance Program is perhaps one of the best examples of a well-designed infrastructure intervention with a strong gender focus. Findings based on the impact assessment of CARE's Integrated Food For Development (IFFD) project show that road improvements "caused women [to increase] traveling proportionately more than men ... although the number of women travelers remained very small in comparison with men" (Langworthy 1999).

However, the effect of infrastructure on women in a country like Bangladesh that sanctions a relatively rigid division of work and space between men and women might not be linear (Cashin and Musillo 2001). Therefore, the actual outcome requires careful attention to planning during preparation (World Bank 1994).

Key Issues and Research Gaps

Farm sector: Though the transformation of agriculture in Bangladesh has proceeded relatively rapidly, the relative decline in the share of agriculture in income and employment is a central feature of economic development observed in many other countries. In the literature, a number of factors are found responsible for the decline in agriculture including (a) the relatively low income-elasticity of demand for food (Schultz 1953), (b) the relatively lower rate of technical progress in agriculture when compared to non-agriculture (Chenery et al. 1986), and (c) the different rates of capital accumulation in agriculture and non-agriculture, which results in a change in capital and labor endowments between the two sectors. This in turn leads to a decline in the share of the relatively labor-intensive agricultural sector in total output, and a relative increase in the share of output of the capital-intensive non-agricultural sector. However, which of the factors are particularly responsible in the case of Bangladesh has not been examined yet. More importantly, what benefits this structural change brings to poor women and the landless and how women and landless households are coping with this transition are not adequately understood yet.

Non-farm sector: The rural non-farm sector in Bangladesh has emerged, as evidence indicates (Hossain 2002, Toufique and Turton 2002), not as a last resort of low-productivity income and employment but as a dynamic engine of growth. However, the empirical understanding of the nature and extent of the non-farm sector is not adequate (Mandal 2003). What is driving the non-farm sector growth, particularly the dynamic part of the non-farm sector? To what extent is it linked to and supported by agriculture? What public policy interventions are needed to promote a dynamic rural non-farm sector?

Similar to the inadequate understanding of the forces that drive the development of the sector, there is hardly any understanding of the formal and informal entry requirements and entry barriers to the non-farm sector by entrepreneurs and workers. What are the entry barriers for

women and landless households? What is happening to the landless women in rural areas? Though Hossain (2002) mentions schooling as an entry requirement, that comment seems too general to help policymakers formulate interventions.

Anecdotal evidence shows that the development of the non-farm sector has spatial characteristics. Toufique and Turton (2002) have noted that regions where the farm sector is lagging are also regions where the non-farm sector is lagging. But the reasons for this are not explained. The question is then, why is change happening in some regions and not in others? One hypothesis is that the growth in the non-farm sector in a particular region is driven by its links with urban areas, by a critical set of infrastructure services, markets and institutions, and by external links (migration and international trade). However, the validity of this hypothesis has not been empirically tested in Bangladesh yet.

The food value chain: One special case of non-farm sector development in recent years is the emergence of the food value chain. This is of particular interest since it is strongly linked to the farm sector and creates a real continuum between rural and urban areas. The development and importance of the modern food value chain in Bangladesh has not been examined. What are the characteristics of this food value chain? How are markets organized and how are values distributed along the chain? Who are the actors and agents? What are their contributions and receipts? What determines the inclusion of producers or intermediaries into this value chain? How can landless households and women be included in this value chain? What type of policy interventions are needed to ensure this emerging value chain is pro-poor?

Infrastructure, institutions and markets: Given the level of private human, physical and social capital, the participation of women and landless in non-farm sector as well as in other productive activities that ensure a sustainable livelihood for them depends on their access to public services and the functioning of markets and non-market institutions. Evidence indicates that in Bangladesh and other countries, public investment in infrastructure such as roads is least discriminatory and most useful in opening new income and employment opportunities for women and landless households. Though the general benefits of infrastructure and markets are well known, there are many questions yet to be answered. What is the minimum set of infrastructure and markets needed to ensure a viable linkage/continuum between rural and urban areas? What type of public infrastructure is needed most for pro-poor non-farm growth? If infrastructure is welfare-improving for landless and women, how should it be provided? What are the alternative institutional mechanisms when public provision is inadequate?

In the specific case of Bangladesh, the Local Government Engineering Department (LGED) has developed a number of physical market places. Though they are helping to bring consumers and producers together, social restrictions mean that women and the poor will have a difficult time to gain acceptance there. What are the impacts of these market places on farm and non-farm growth? What are the formal and informal barriers to entry, and how can we make these market places more inclusive for women and the poor?

Agriculture, Rural Areas, and the Urban Economy

Researchers on Bangladesh have so far concentrated on describing the shift from agricultural production to non-production activities. There is little “urban” perspective on how nominally rural activities present themselves in the urban space. But intersectoral interactions do also work the other way.

Agriculture enters the urban environment through production in urban or peri-urban areas and through employment and investment in other parts of the agricultural and food system. Data on the geography of the different components of system, including the agents, their significance, and their connection with urban areas, are scarce. We need information on what goods farmers market where. Most likely, market chains will also differ by product and class of farmer. From this we can gauge the actual and potential contribution of each component to the urban (and rural) economy and employment. By noting the participation of different groups in these components (women, the urban poor, small farmers, and the rural landless), we can also estimate how impacts on these different groups vary with characteristics of the chain.

Changes in the marketing channels for food and agriculture will almost accompany changes in patterns of agricultural production, such as those occurring in the Northwest with opening of the Jamuna Bridge. The main actors behind those changes *in agricultural production* (the agribusinesses, supermarkets, and large traders like those noted in the previous section) are urban-based, a prime illustration of a rural-urban link that is often forgotten. Most often analysts discuss them as if they were separate from the urban economy, and, on the other hand, categorize their activities as “non-ag” or “off-farm” as if they were somehow disconnected from agriculture as well.

Whether these new actors can successfully energize agricultural production remains to be seen. Beyond that, how they will interact with the various groups and whether their involvement will benefit or bypass the region are also still uncertain. Urban-based trader, supermarkets and agricultural companies may drive demand for new products, especially fruits and vegetables. They potentially may provide needed credit, inputs, and technical assistance that farmers cannot otherwise access and the government cannot adequately provide.

At the same time their involvement raises a number of questions about the well-being of farmers and of the region. Will producers have enough economic power and legal standing to negotiate mutually beneficial contracts with adequate protections? Supermarkets themselves are not producers nor are they organizationally oriented to be ones. They can serve as important purchasers, but they do not have the same incentives as producers to identify which crops will generate the greatest farmer profit. Particularly they are not set up to identify crops or varieties from among all choices, nor provide all needed inputs and technical assistance.

In addition, as increasingly important buyers, will they lead small farmers into potentially exploitative, monopsonistic relations? As with traders who have their own connections to certain markets for, say, fruit and vegetable exports, these larger agribusinesses and supermarkets will, naturally, tend to supply their own “chains.” In a competitive environment with many buyers, these are fine developments. But in Bangladesh they are thin threads. These threads hold the potential for exploitation, for concentrating risk, and for bypassing local and regional development. If these agents do not link with market towns and intermediate cities but with the city corporations and with export markets, regions will miss out on the benefits from the increased dynamism of agriculture and on the opportunity to gain more jobs and promote economic growth by adding value locally. As a second-round effect, the expansion of the agriculture and food system locally can mediate growth of the larger urban centers by providing jobs for the landless and giving potential migrants a reason to stay in rural areas or in the smaller towns and cities.

IV. Flows of Goods, Information, Investments, and Services

In analyses of urban-rural links, generally the flow of goods is thought of as going from rural to urban, and the flow being agricultural products, mostly food. Previous sections have already discussed the broad outlines of this sort of flow. (In Bangladesh, agricultural goods are the primary items exported from rural areas, rather than tourism or natural resources one might find in other countries.)

But what do the urban areas provide to rural areas in return? In an exchange system, at least the farm-gate value of the crops or products that end up in cities must also be in the hands of rural households. Some of this undoubtedly goes to purchase more food and other rural-produced goods. But what about demand for urban-produced goods or imports? Given the large number of rural dwellers, the potential rural market for urban goods is large. Information is lacking about this “urban” side of the rural-urban exchange, however. We found practically no literature that explored their interaction of rural consumers or producers with urban suppliers or showed the importance of rural consumers to the urban economy.

A comprehensive study of the rural-urban “terms of trade” would shed light on the importance of rural demand to urban livelihoods and the urban economy. The study should include data on the rural “demand” for market information, especially price information, and for investment. Much agricultural price data is actually urban-based, such as wholesale and retail market data.

We also found little about how urban-based investment finds its way to rural areas, for agricultural production or for non-production activities. To what extent is financial investment a recycling of agricultural economic surplus? To what extent does investment rely on funds from outside? How important are remittances and microcredit as sources of investment? What are investment patterns? And how does access to these sources of funding differ by income class, farmer type, or crop?

One can conceive of a “rural demand” for services as well. Access to normally publicly-provided services such as water, sanitation, health, and education varies by location. The provision of these services is determined by various factors, only one of which is cost. All these can be considered basic needs to which there are fundamental human rights. From that perspective, the government should ensure provision of these basic services regardless of cost. In reality, different conditions lead to different means of provision.

Rural areas may find that they have no or inadequate provision of education or health care. Most rural children appear to have schools within a reasonable distance, but parents express concern about quality. Rural health is the responsibility of the Ministry of Health, and NGOs provide additional services, including health and nutrition education. These kinds of services are essential to ensure that rural dwellers have the skills and health to be able to make a successful transition to non-agricultural or urban employment.

The private sector, especially important for urban development and non-farm growth, requires an array of services. Financial, telecommunications, and legal services are just a few. Daniels (2003) provides an initial accounting of private sector enterprises in Bangladesh, and cites and numbers of other recent surveys, including one that examines competitiveness and investment climate. But a study of the forward and backward links among enterprises and their spatial location is missing.

A series of basic questions remains. How are the public and private services needed for both rural and urban economies provided? What is the nature of service demand and exchange between the two areas, and what does it mean for employment and livelihoods? The literature on these questions in Bangladesh is scarce.

V. Spatial Interactions and Flows: Natural Resources and Wastes

Urban and rural interactions are characterized not only by flows and synergies, but also by conflict, particularly at the urban periphery (peri-urban areas) and particularly over natural resources. Tacoli (1998) summarizes the main issues:

Urban centres, especially medium-sized and large ones, have a significant environmental impact outside the built-up areas and often outside urban and metropolitan boundaries. Cities' ecological footprints (Rees 1992) usually comprise areas defined or considered as rural. The ecosystem of the regions around large and prosperous cities is generally transformed by the demand for resources and the generation of urban concentrated wastes. For example, analyses of environmental degradation in the Jakarta metropolitan region in the 1980s have identified severe problems ranging from water pollution; loss and degradation of agricultural land through urban expansion; erosion; and threats to the remaining forest, coastland, and marine ecosystems from, among other things, the uncontrolled disposal of toxic wastes (Douglass 1989). Air pollution from city based industries, thermal power stations and motor vehicles often results in acid rain precipitation that damages terrestrial and aquatic ecosystems and may affect crop yields outside the city (Marshall et al. 1997; Satterthwaite 1997).

In Bangladesh, policymakers appear to pay only intermittent attention to ground and air pollution, even as the principal causes of pollution -- increasing traffic, growing cities, economic development and industrialization -- grow apace. Banning of two-stroke "baby taxis" in Dhaka and conversion to natural gas for fuel is one example of positive action. Yet comprehensively dealing with pollution seems far beyond Bangladesh's current political capabilities and institutional capacity.

In rural areas, brick factories still spew smoke into the air, floating chemical and particulate pollution across both rural and urban landscapes. Combined with rain, the result is air and water pollution across a region. In urban areas, basic land rights are unclear or easily violated by those with political connections, as newspaper reports about encroachment on Dhanmondi Lake and CARE's experiences in Tongi slum areas have shown. In this environment, seriously addressing the pollution caused by industrialists or by farmers is unlikely. At the household level, in a casual walk through slums, an observer can easily identify pools of industrial waste amid unsatisfactory sewage and drainage systems that do not take care of household wastes either. Mixing with waste, rainwater can flood houses or drain off into various neighborhood ponds, which residents often use for washing clothes, for bathing, and for toilets.

Although we have no studies specific to Bangladesh, industrial pollution likely occurs side-by-side with pollution caused by agricultural activities (drainoffs of fertilizer, pesticides, herbicides) and livestock, especially cattle, that occur on the urban periphery or even inside densely populated areas. Proliferation of farms that grow high-value fruits and vegetables close to the city, which often require greater use of agrochemicals, may raise the risk of environmental

damage. Of course, we also know agriculture and industry can co-exist, in a positive symbiosis. Some cities around the world have begun programs to recycle organic urban waste for compost for agriculture. Others promote urban agriculture as a use for wastes but also as a way of greening the city, as well as to increase incomes and improve diets. As urban areas grow and encroach on previously rural land, the potential for conflict over control, use, and spillover effects (as with waste runoff) has increased.

Most reporting, however, on the use of natural resources at the urban-rural interface, however, seems anecdotal. Studies are urgently needed on the nature of the peri-urban interface and the extent of impact of pollution on the rural and the urban environment. Studies are also needed how Bangladesh will handle coming competition for natural resources, including land but especially water, between urban and rural areas and between farmers and industrialists.

Agricultural and urban demands are outstripping planning to meet needs. Conflict arising over water use seems inevitable, not only between rural and urban areas but with Bangladesh and its South Asian neighbors. The National Water Management Plan (2001) cites urgency in dealing with these challenges, but the role urban and rural areas will play in causing or helping to solve problems is unclear.

VI. Spatial Interactions: Policies, Policymaking, and Planning

The policy environment is important to shaping urban-rural interactions. Government policies affect how the private sector acts and makes decisions about where and in what to invest, for example. Is rural infrastructure adequate for market development? Do pricing and subsidy policies favor one crop, one sector, or one region over another? Is government decisionmaking transparent and participatory and enforceable by law or do certain elites influence and even flout results? The overlapping influence of different institutional actors adds a spatial dimension. Municipalities, rural district administrators, regional and national governments, and the international environment operate on different parts of the urban-rural continuum.

The political and institutional bottlenecks to synergistic urban-rural interactions and links to poverty reduction are context specific. Is it control of land, capital and trade by economic elites? This seems to have been the case in South India. Without widespread income growth, agricultural development did not carry over to stimulate small city development. In Brazil, the promotion of citrus production led to higher overall agricultural incomes -- but also outmigration as land became ever more concentrated (Tacoli and Satterthwaite 2003).

The nature and effects of interactions, then, depend on the historical, cultural, economic, political, and social context. Good price information systems, good farm-to-market infrastructure, and credit, along with making land accessible to smaller farmers, are underlying elements of synergies. Small and medium cities play crucial roles. The smaller cities are the places where almost half of urban dwellers live, and where most rural people have their "urban" interactions. They are what link urban and rural together. By benefiting from and generating rural growth, and relieving pressure on larger cities, they have the potential to assist in reducing both urban and rural poverty.

Despite fairly similar ecology, significant regional inequalities exist in Bangladesh. The reasons for these inequalities are not well understood. Part is due to economic conditions with, for example, the west tied closely to trade with India and Chittagong to exports. Others, such as Sylhet, are known to receive large amounts of remittances from abroad. Surely, too, some

disparities are due to patterns in public investment over time. Growth or lack of may be due to, among other things, access to agricultural credit and technologies; quality of market infrastructure; and availability of health and educational facilities. Yet apparently central government budget allocations still fail to take such regional disparities into account. Instead, expenditure allocations are apparently made on a per capita basis, without regard to need, but then further distorted by political influence.

Many Bangladeshi observers concur that these conditions demand that policymakers pay greater attention to planning and program implementation (Afsar 2003b; Bhuyan et al. 2001; Islam 2003). A recent study also emphasized the importance of good governance as a driver for pro-poor change (Duncan et al. 2002).

With diversity of flows and livelihoods spread across urban and rural areas, policymakers and programmers must think regionally. They cannot plan “only” for agriculture and only within restricted spatial concepts of what is urban and what is rural. Needs analysis and planning must occur on a regional level, and, to take advantage of a virtuous cycle of urban-rural development, must link agricultural-based development to development of the small and medium size urban centers.

The government has made various attempts to develop an urbanization, or urban, strategy. Past attempts have even acknowledged the importance of considering urban-rural relations holistically. In line with thinking of the time about growth poles, the 1976 HABITAT report called for the establishment of various planning regions, with one medium-sized town to be the focal point of growth. The 1980-85 Five Year Plan envisaged infrastructure and service facilities to scale up from 100 centers to about 1200 growth centers, which would then be connected by a transport network. In 1982, the government upgraded thana headquarters to upazila status, effectively making them part of the “urban” structure. Master plans were developed for these new upazilas, but upon coming to power the BNP abolished the system. This and later governments abandoned such plans (Islam 2003).

Currently there is no or only weak support for urban or regional planning. Urban and rural activities are often split. The Ministry of Health, for instance, is responsible for the health system in the rural areas, while the four city corporations operate their own health systems independently, with support from international donor agencies. Responsibility for health systems in other municipalities seems unclear.

Analysts argue that Bangladesh should encourage the growth of secondary cities and towns, and extend urban services to existing villages. As has worked in Mexico, the government might locate export processing zones outside the major metropolitan areas to accomplish this goal (ensuring, of course, that sufficiently qualified labor and infrastructure exist to support the zones). In addition, the government could upgrade important rural *haats* and bazaars and link them with farms by all-weather farm-to-market roads. The government might also expand its youth program in rural thanas that provides training in agricultural as well as non-agricultural activities. The curriculum currently includes poultry raising, fish farming, horticulture, sericulture, engineering, hair-styling, laundry, pharmacy, carpentry, automobile repair, and food and fruit processing. This sort of program can give individuals skills to respond to or create demand for these off-farm activities, or to carry skills with them if they migrate to urban areas (Bhuyan et al. 2001).

Among the first steps needed would be to establish planning departments in each city and municipality (with coordination responsibility for regional planning with the district and divisional

governments), and to have the government disaggregate the budget by division and region (Afsar 2003c, Islam 2003). Without that, says Afsar (2003c), it will not be possible to promote intra- and interregional equity in resource distribution, because as it stands the resource distribution is not known and it may or may not correlate with actual regional needs. Tacoli and Satterthwaite's (2003) review of reasons for failures of past attempts at regionalized development of this nature emphasize the critical importance of paying attention to local needs and context.

Of course, institutional capacity, inertia, and interests may make regional-level planning difficult. Without it, however, Bangladesh will be certain to misallocate resources and fail to take advantage of urban-rural synergies to reduce poverty and spur economic growth in both urban and rural areas.

VII. Conclusions

Urban and rural livelihoods spread across sectors and space. Development policies must take this reality into account. Policymakers cannot focus infrastructure and investment in urban areas, or link rural areas only to large cities and export markets, without thinking of local and regional market towns and intermediate cities or without thinking how urban livelihood are influenced by rural development³. They cannot conceive of migration without understanding that it is a phenomenon embedded in what is going on in both urban and rural areas, or more appropriately, all along the rural-urban continuum. Policymakers need to provide the policy environment and the infrastructure and human capacities to take advantage of the rural-urban transformation. Production, marketing and processing systems are changing.

With the right policies and appropriate infrastructure, there will almost certainly be opportunities for investment and employment. If policymakers do not conceive broadly of the synergies between urban and rural areas, both the urban and rural poor may be left behind. And if they do manage the conceptualization, they must ensure that education, training, and information reach everyone, because otherwise those without capacities or access to opportunities will be left behind.

This paper has attempted to provide some initial insights into the nature of and changes occurring in the links between urban and rural areas of Bangladesh. Two particularly important themes that emerge are: 1) while "non-farm" activities are becoming increasingly important to rural livelihoods, the basis of the rural economy is and will remain agriculture; and 2) the ability to participate in this transformation of the rural economy will determine whether rural dwellers will be pulled or pushed to urban areas. A third point is that very little literature exists to help us understand how the links affect the urban economy and most especially the urban poor.

With regard to the first point, it is important to note that in fact many of the non-farm activities are in fact directly part of the agricultural and food system. With the regard to the second, evidence appears to indicate the possibility of two streams of migrants: those who have resources and skills and can make a successful transition to a non-farm economy, and those,

³ Studies of urban poverty and livelihood in the slums do exist, but they are not covered substantially here for two reasons. First, this review focuses on the connections and synergies between urban and rural livelihoods, not urban or rural poverty per se, as it sits within its own location. Second, and this is a significant gap identified by the review, known available studies of urban poverty do not incorporate this perspective and, outside of some studies on migration and remittances, pay little attention to how livelihoods of the urban poor connect broadly with rural areas and the rural economy.

such as the landless, who do not. Both of these points and their qualifiers are intimately connected to the development of a vibrant food and agricultural system, and linking that to market towns and intermediate cities so that regional development is not bypassed, with negative consequences for urban dwellers.

This is not to say that economic development and rural-urban transition will not occur if Bangladesh does not take advantage of the potential synergies in rural and urban development. But only that the process will be much longer, much more difficult, and will involve adjustment to migrants who have been pushed from the rural areas rather than to ones who have been dynamically pulled.

Other changes will occur along economic, social, and political dimensions. They will occur as flows of people, goods, services, information, and investment bring rural and urban areas closer together, a genuine phenomenon in population-dense Bangladesh. Policymakers, development practitioners and researchers must be sensitive to the nature of those changes, and examine them closely so that the changes ultimately benefit the poor and the vulnerable, especially women, children, and the landless. Needs analysis and planning must occur on intersectoral and regional levels in order to provide the appropriate catalysts to the entire economy and to benefit from a virtuous cycle of urban-rural development.

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Hilary Sunman	Economic Adviser, Policy Division	DFID
Eric Hanley	Senior Social Development Adviser	DFID, Bangladesh
Johny Sarker	Chars Livelihoods Programme Coordinator (CLPC)	DFID, Bangladesh
Martin Leach	Senior Programme Manager, Pro-Poor Growth Group	DFID, Bangladesh
Peregrine Swann	Senior Infrastructure & Livelihoods Adviser	DFID, Bangladesh
Noel P. Magor	IRRI Representative, Bangladesh	International Rice Research Institute (IRRI)
Ainun Nishat	Country Representative	IUCN, The World Conservation Union
Hossain Zillur Rahman	Executive Chairman	Power and Participation Research Center (PPRC)
Zahid H. Khan	Senior Urban Specialist	The World Bank
Sadeka Halim	Associate Professor, Department of Sociology	University of Dhaka
Nazrul Islam	Professor, Department of Geography & Environment and Honorary Chairman	University of Dhaka and Center for Urban Studies (CUS)
Shahnaz A Zakaria	Project Management Specialist, Office of the Economic Growth, Food and Environment	USAID
Syed Sadrul Ameen	Senior Programme Manager, Food Security & Disaster Management, Economic Growth, Food and Environment	USAID
Frank Matsaert	Private Sector Adviser, Growth Team	DFID, Bangladesh