Editor's Desk

The November 1, 2014 issue of Thinking Aloud focuses on farm and nonfarm sectors in rural Bangladesh. The first article explores the determinants of the switch between farm and nonfarm employment. The article, using a constructed pseudo panel data for the period between 1995 and 2010 and associated econometric method, argues that several factors affect the rise in employment in the rural nonfarm sector relative to the farm sector, and the largest pull effect comes from the rise in education, and the largest push effect stems from the fall in relative farm income. Highlighting agricultural sector’s spillover effects on the rest of the economy, the second article, using time series econometric models, underscores the importance of an agriculture-focused growth strategy in Bangladesh. The article also emphasizes that such a strategy would generate immediate anti-poverty effects while ensuring a huge market for products and services for local industries. Short interviews of a small grocery-shop owner and a van-puller from a rural area of Northern Bangladesh show the underlying dynamics in the rural nonfarm sector. Finally a short article presents a very brief overview of the strategy for rural nonfarm activity in the Sixth Five Year Plan of Bangladesh.

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What Determines the Switch between Farm and Nonfarm Employment in Rural Bangladesh?

Selim Raihan and Syer Tazim Haque

Though agriculture has been the major employment generating sector, the rural economy in Bangladesh has been seeing a transition over the past two decades. While unpaid family work in the rural area is still highly farm-based, paid employment is experiencing a transition, shifting more towards the nonfarm activities. Recent labor force surveys reveal some strong growth of rural nonfarm economy. According to one estimate the rural nonfarm sector accounts for about 40 percent of rural employment, and in recent years has grown by more than 5 percent per annum.

There have been several studies on the rural nonfarm sector employment in Bangladesh. Some of these studies used econometric models and identified the factors behind the nonfarm employment. However, one of the major limitations of these studies is that they couldn’t take into account a longer time horizon, and control for endogeneity and heterogeneity bias. We have explored the factors determining the transition and dynamics of the rural nonfarm employment in Bangladesh during 1995 and 2010 with the help of a constructed pseudo panel database using data from four rounds of Household Income and Expenditure Survey (HIES). Our study uses the methodology developed by Raihan (2014) (Raihan, S. 2014. “An alternative methodology for constructing panel data” for the construction of the pseudo panel database. Data of rural households for each survey year is divided into 100 cohorts where the cohorts are defined based on percentile ranking of monthly consumption expenditure of households. As there are 100 cohorts in each survey year, four rounds of data give us 400 observations in total.

Simple observations of the changes over time in the farm and nonfarm employment of the cohorts during 1995 and 2010 tells us that the average nonfarm employment across all cohorts in 1995, 2000, 2005 and 2010 were 40%, 36%, 44% and 47% respectively. Looking into specific cohorts for the last decade shows us the shift more profoundly. In 2000, average nonfarm employment for the 1st, 25th, 50th and 75th percentile cohorts were 37.1%, 20.23%, 32.40% and 30.0% respectively, which rose to 48.45%, 56.41%, 45.53% and 49.5% respectively by 2010.

For the econometric analysis of the key determinants of the rural nonfarm employment, using our pseudo panel data, we have used a two-stage instrumental variable regression method. At the first stage, we have run a regression of the factors affecting the relative farm income (ratio of farm income to off-farm income). We have used age of household head and average years of schooling of household head as the instruments. At the second stage, we have used the predicted value of the relative farm income as the explanatory variable along with other explanatory variables in the regression equation where the dependent variable is the relative nonfarm participation (the ratio of the number of adults participating in the rural nonfarm activities to the number of adults participating in the rural farm activities within any percentile cohort). This dependent variable shows the switch between rural nonfarm and farm employment. Other explanatory variables are average age of adults within any percentile cohort, average years of schooling of adults within any percentile cohort, household size, dependency ratio, size of land holding, the labor force participation (LFP) rate of adults, and share of international remittances in household incomes. All variables are expressed in natural logarithms.

We have run fixed effect model for the regression. Average age of the adults has a negative significant effect and average education of the adults has a positive significant effect on the relative nonfarm participation, suggesting younger and educated adults tend to participate more in the nonfarm activities than in farm activities. A 10% decline in the average age of adults and a 10% increase in the average years of schooling of the adults lead to the rise in the relative nonfarm participation by 7.2% and 2.7% respectively. Dependency ratio and household size do not have any significant effects on the relative nonfarm participation. Relative farm income has a push effect: a 10% fall in the relative farm income leads to the rise in relative nonfarm participation by 2.3%. Land holding also has a push effect: a 10% fall in the average size of landholding leads to the rise in relative nonfarm participation by 0.6%. The rural LFP rate has a positive effect: a 10% rise in rural LFP rate leads to the rise in relative nonfarm participation by 6.2%. International remittance doesn’t seem to have any significant effect on relative nonfarm participation. We have also computed the z-scores of the variables in the regression, and it is found that as far as the employment in the rural nonfarm sector relative to the farm sector is concerned, the largest pull effect comes from the rise in education of the adults, and the largest push effect stems from the fall in the relative farm income.

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Is an Agriculture-Focused Development Strategy a Right Choice for Bangladesh?

Mohammad A. Razaque and Selim Raihan

After more than two decades of neglect by academic and donor communities, agriculture returned to the center stage amidst historically high food prices inflicting widespread food insecurity and threatening several years’ of progress made on poverty reduction. International donors have made fresh commitments for increased resources to be devoted in agriculture of developing countries with the possibilities of different desirable outcomes. Key questions that are being asked include, inter alia, how to formulate country strategies so that the sector can be used to support structural transformation of the economy under ‘heterogeneous’ conditions (de Janvry, 2010). This renewed emphasis on agriculture has an interesting context and important policy relevance for Bangladesh. Despite registering agricultural output growth faster than that of population, the country faces formidable food-security challenges comprising food availability, accessibility and affordability by the poor. Besides, agricultural growth is considered to be vital in tackling poverty. Sustained economic growth with the on-going structural transformation, as reflected in the declining relative significance of agriculture, is generally considered to be a usual route to development. Nevertheless, addressing food insecurity and poverty would imply a continuously prominent role of agriculture. In this respect, an important issue that needs to be better understood is the implications of a reinvigorated agriculture-focused growth strategy for the overall economy.

However, the relevant policy choices involving agriculture, growth and poverty reduction may not be straightforward: the impact of agricultural growth on poverty-reduction is likely to be strong, but the effect on the overall economy is not clear. There are also concerns about weak linkage effects of agriculture. In an open economy farm outputs provided from export-competing consumption with the comparative advantage determining sectoral resource allocation. If the productivity in agriculture is low, nonfarm sectors can be argued to be the most important vehicle for growth and poverty reduction.

The role of agriculture in the growth-poverty reduction nexus is one of the most critical medium to long-term policy issues for Bangladesh. The growth-poverty trade-off associated with agriculture-focused development strategy is greatly mitigated if farm activities can exert strong linkage effects for the rest of the economy. Despite attracting so much attention, discussions on these dualistic models applied for studying sectoral linkages, agricultural growth can boost economic growth causing growth of outputs in other sectors. Finally, impulse response functions are computed to trace the movements of different variables. A one standard deviation shock in the agricultural sector generates a sustained positive effect on the services output, and almost a similar effect, although slightly fluctuating, is also exhibited for the manufacturing output.

There are important policy implications of the above findings. First and foremost, agriculture has significant positive spillover effects. As such, a policy emphasis to promote agriculture will necessarily have adverse implications for other sectors. There exists an enormous scope of productivity improvement in agriculture. It is widely recognized that agricultural production is still much less capital intensive compared to many other countries. Future productivity gains therefore are likely to come from additional investment in this respect. This will not only bolster the firm sector’s ability to provide food for population and raw materials for industrial sectors, but also tax revenues for government as well as saving generation for investment elsewhere. The farm economy appears to exert large and significant positive influence on growth and productivity in the services sector, which is often regarded as a low productive area. Movement of labor and saving out of agriculture to non-agriculture can explain part of the inter-sectoral linkages. Recent evidence shows wages in agriculture are on the rise along with the growth in services, particularly the rural nonfarm sector has flourished. This seems to indicate a more active role of agriculture in which it not only does provide capital and labor to other sectors, but also a huge market for products and services for local agriculture. In general, urban informal sectors have been considered to be the ‘bridge’ between commodity based agriculture and livelihood earned in the modern sectors, providing the transition from underemployment at farm tasks to regular wage employment in the local economy. If services sectors are actually responding to increased demand of the farm economy, the nonfarm/nonagricultural linkages mark an important structural transformation process for Bangladesh.

Notwithstanding the spillover effects, an agriculture-focused growth strategy will enhance the sector’s ability to sustain a decent income growth for rural population thereby triggering immediate anti-poverty effects while ensuring a huge market for products and services for local industries. Using the time series data, we then test for a valid long-run relationship (cointegration) amongst variables using appropriate time series and econometric techniques. The results associated with the dual sector model provide strong externality effects of agriculture. These effects are robust as they are maintained under different model formulations. When the model is appropriately modified as proposed by Gemmell et al. (2000), there is also the evidence of cointegration between agriculture and overall economic output. The estimated long-run agricultural elasticity ranges from close to 1 to 1.6. These results are supported by well-behaved short-run dynamics as the corresponding error-correction models satisfy usual properties with the positive effects of farm output growth borne out. To clear out the natural growth-accounting effect of agriculture on overall GDP, empirical tests are carried out. The estimation of this relationship, using a methodology that treats both the variables as jointly determined, generates positive and highly significant effects of agriculture on the nonfarm sector. We also examine inter-sectoral linkages involving agriculture, manufacturing and services. These components of GDP seem to move together and confirm a valid long-run relationship. The effects of agriculture on services are found to be quite large: a 1 per cent increase in agricultural GDP leads in the long-run to a 0.114 per cent increase in services output. On the other hand, the same increase in manufacturing GDP results in 0.25 per cent increase in service GDP. Along with detecting causality effects running towards agriculture, more importantly for our case, there is also the evidence of agricultural growth causing growth of outputs in other sectors.

References

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Notwithstanding the spillover effects, an agriculture-focused growth strategy will enhance the sector’s ability to sustain a decent income growth for rural population thereby triggering immediate anti-poverty effects while ensuring a huge market for products and services for local industries.
The Sixth Five Year Plan (SFYP) considers the promotion of rural nonfarm activity (RNFA) as an important and effective poverty reduction strategy in Bangladesh. It identifies a number of challenges which are faced by the RNFA: (i) RNFA includes a diverse group of activities, and is difficult to define it as a sector, hence lacks any baseline assessment; (ii) activities in RNFA are often financed by microfinance, which can only support very small-sized activities; (iii) people engaged in RNFA lack capacity and skill for producing quality products and marketing them, have inadequate access to information; (iv) lack of institutional financing; (v) weak management capacity; and (vi) inadequate infrastructural facilities particularly energy and communication. Strategies in the SFYP focuses on two broad areas: (i) improving the rural investment climate; and (ii) supporting institutional framework. Measures for improving investment climate includes ensuring enhanced supply of energy in the rural areas emphasizing on bio-fuel and solar energy; emphasis on routine maintenance of the existing roads, development of waterways and railway communication; up-scaling and technological upgrading of small enterprises; provision of training for workers and entrepreneurs; promoting linkage with agriculture and greater value addition of farm products through a boost in agro-processing industries, and arranging local-level fairs regularly to promote RNF products. Supporting institutions are required in mainstreaming RNFA in rural development involving stakeholders like local government institutions, private entrepreneurs in RNF and finance and other support service providers. The RNFAs are undertaken mainly within the informal sector. However, creation of an enabling environment for them and provision of some support services would make this sector more vibrant and will contribute substantially to poverty reduction. SFYP suggests some interventions which include improving marketing capacity by providing sales centers in rural and other semi-urban markets; training and awareness building on hygienic agro-processing and food processing activities; strengthening SME Foundation so that it serves more effectively; providing women entrepreneur with basic skills about management and steps linking them to markets; setting up of more vocational institutes in the rural and semi-urban areas, allocating more funds under microcredit and microfinance, improving the management of RNFS through organizing training, orientation, and workshops, disseminating market information and providing institutional and logistic support to entrepreneurs, taking initiatives by the government to create ICT villages in rural areas and taking initiatives by government and NGOs to bring diversification in products and upgrading product designs.

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ARTNeT Conference, 22-23 September, 2014, Bangkok

ARTNeT and ESCAP, with support from IDRC Canada, organized the Asia-Pacific Economists' Conference on "Trade in the Asian century-delivering on the promise of economic prosperity" on 22-23 September, 2014 in Bangkok, Thailand. The conference was part of ARTNeT's 10th anniversary celebration. Sessions of the conference included "International trade research agenda advances over the last decade and ARTNeT responses", "Perspectives on Global development 2014: Boosting Productivity to meet the middle-income Challenge (OECD)", "Empirical, trade analysis", "Food security and trade", "Services trade and links to global value chains", "FDI and Development" and "Economic reforms and opening in LDCs", "Regional integration" and "Trade inclusiveness and inequality". Dr. Selim Riahi (Executive Director, SANEM and Professor of Economics, University of Dhaka) presented a paper on "South-South Trade: A Quantitative Assessment" in the session on "Empirical trade analysis". In his presentation, Dr. Riahi discussed about the rise of the South in international trade with empirical analysis. He analyzed the trend in the South-South trade using different country groups: all South, LDCs, SVEs, emerging South, South excluding emerging South and North. Additionally, the presentation also included the factors that determine South-South trade. Dr. Riahi presented the regression results of basic gravity models, augmented gravity models and welfare effects of preferential and free trade scenarios among South using CGE models.

Forthcoming Event

The Dynamics of Economic Growth

SANEM, in collaboration with the Effective States and Inclusive Development (ESID) Research Centre of University of Manchester, is going to organize a launching event of the book "The Dynamics of Economic Growth: A Visual Handbook of Growth Rates, Regimes, Transitions and Volatility", written by Sabyasachi Kar, Lant Pritchett, Selim Riahi and Kunal Sen, on December 10, 2014 at the BRAC Center Inn, Mohakhali, Dhaka. Prof. Wahiduddin Mahmud will be the Chief Guest of the event. Prof. Shamsul Alam (Member GED, Planning Commission of Bangladesh), Dr. Sultan Hafeez Rahman, Executive Director, BIGD), Prof. Barkat-e-Khuda (Department of Economics, Dhaka University), Prof. Mustafizur Rahman (Executive Director, CPD), Dr. Binayak Sen (Research Director, BIDS), Dr. Ahsan Mansur (Executive Director, PRI) and Dr. Edgard Rodriguez (Sr. Program Specialist, IDRC) are expected to be the panelists for the discussion on the book.

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Joint ITC-WTO Workshop on “AFT and SME Competitiveness”, 9 October, 2014, Geneva

ITC and WTO organized the workshop on "Aid for Trade and SME Competitiveness" on 9 October 2014, at the WTO Headquarter in Geneva. The workshop focused on the constraints SMEs faced in "internationalizing" and how Aid for Trade could be helpful addressing those challenges. After the keynote presentation by Dr. Marion Jansen (Chief Economist, ITC), the workshop was facilitated by a panel discussion with three panelists: Dr. Susan Stone (Senior Trade Policy Analyst, OECD), Ms. Hang Tran (Coordinator, Enhanced Integrated Framework, WTO) and Dr. Selim Riahi (Executive Director of SANEM and Professor, Department of Economics, Dhaka University). Dr. Marion Jansen gave an overview of a joint ITC-WTO background paper which explained the importance of SMEs for employment, income growth and gender empowerment, SMEs' high failure rate, notably for developing countries and particularly for LDCs, venture into exporting. These themes were further discussed and elaborated by Dr. Susan Stone (Senior Trade Policy Analyst, OECD) where she highlighted the positive productivity effects for SMEs in trade and the issues of value of support to improve SME networks. Dr. Selim Riahi, during his deliberation, highlighted that export sectors of LDCs face a number of domestic binding constraints, such as lack of access to finance, weak infrastructure and weak institutions, which reduce the competitiveness of these sectors. In addition to these domestic constraints, there are critical market access issues, where exports from LDCs encounter a variety of NTMs/NTBs in developed and advanced developing countries' markets. These domestic binding constraints and market access issues hinder these countries to materialize their comparative advantages in many export sectors. Additionally, problems would be more acute for SMEs in the LDCs. Effective actions under aid for trade can be very useful in mitigating such constraints.

Employment Effects of Different Development Policy Instruments

Steering Committee Meeting at Bern, Switzerland

World Trade Institute (WTI) at the University of Bern, organized a two-day steering committee meeting of the research project funded by the Swiss Programme for Research on Global Issues for Development on 6-7 October, 2014 at Bern, Switzerland. During the first day of the meeting, the country teams from Bangladesh, Ethiopia, Ghana, Madagascar, South Africa and Vietnam presented outline of their scientific research, dissemination plans and administrative arrangements. After that the Swiss team members presented outline of what they have been doing, the pillar level arrangements. After that the Swiss team members presented outline of what they have been doing, the pillar level arrangements. The meeting ended with an intense debate session to take decisions and to discuss about ways to proceed. Dr. Selim Riahi, team leader of the Bangladesh part of the project, attended the meeting and made presentations on the progress of the Bangladesh project.

SANEM is a non-profit research organization registered with the Registrar of Joint Stock Companies and Firms in Bangladesh. Launched in January 2007 in Dhaka, it is a network of economists and policy makers in South Asia with a special emphasis on economic modeling. The organization seeks to produce objective, high quality, country- and South Asian region-specific policy and thematic research. SANEM contributes in governments' policy-making by providing research supports both at individual and organizational capacities. SANEM has maintained strong research collaboration with global, regional and local think-tanks, research and development organizations, universities and individual researchers.