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SUMMARY OF DOCTORAL THESIS

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Title: **Non-farm Employment and Poverty in Rural Bangladesh:
A Case of Advanced Villages**

(Bangladesh 農村における非農業就業と貧困－先進農村の事例)

In recent years, livelihood diversification in rural Bangladesh has become a major challenge for the development partners. Since the early nineties the employment in the non-farm sector (NFS), compared to the farm sector, had been increasing at faster rate, but the growth of the NFS in the early 2000s was not impressive. In this context, despite the Government in its policy documents identified the NFS as a “leading sector”; in practice, the NFS was not getting due attention like the farm sector. A study argued that such negligence by the government might be socially costly in the long run. Another study also found that the NFS expanded quite rapidly in response to the farm sector development and thus it merited special attention in the design of poverty reduction strategies for rural areas. In the context of Bangladesh, following the narrower definition which did not explicitly consider remittance employment as a separate component, several studies on the NFS reviewed the sector, assessed growth potentials, substantiated the participation and household income determinants with some income poverty implications. In addition, in other developing countries, the literatures focused on the following ways: description of trends and analyses on determinants of non-farm employment (NFE), production and consumption linkages, effects of non-farm income (NFI) on farm production/investment and income poverty. Given the problems of poverty and food insecurity in Bangladesh, the Doctoral Dissertation entitled *Non-farm Employment and Poverty in Rural Bangladesh: A Case of Advanced Villages* was aiming at contributing the poverty reduction strategy with a view to promote NFS for creating more employment opportunities, narrow down rural - urban income gap, reduce rural poverty and inequality, and increase household welfare. The study particularly focused on determinants of NFE and NFI diversification, growth linkages of household non-farm enterprises (HNFES) and effects of NFI on poverty (both income poverty and education poverty).

The study was conducted at randomly selected four villages in a typical advanced rural location of Bangladesh, namely Comilla Sadar *Upazila* where the NFS was relatively developed and diversified. The study villages were selected through a preliminary field visit (March 2006) followed by over viewing the NFS and poverty after consulting with related literatures and national level data. The entire analyses were performed based on own managed two intensive field surveys` data conducted at selected villages in August-September 2006 and March-April 2008. For analyzing determinants of NFE and NFI diversification, the first intensive field survey data on 214 randomly selected households` members/workers` participation, hours worked, income, etc. for the year 2005-06. Furthermore, the second intensive survey data on 81 household non-farm enterprises (HNFES) and 175 small households for the year 2007 were used for analyzing growth linkages of HNFES and effects of NFI on poverty, respectively.

I used various micro-econometric techniques for investigations: i) a version of double hurdle econometric regression (Probit and Censored Tobit regressions) for analyzing determinants of participation and intensity of participation (e.g. hours worked) respectively, ii) Censored Tobit regression for estimating determinants of NFI diversification, iii) Probit regression for analyzing the success of HNFES with a view to investigating the growth linkages of HNFES, and iv) several other techniques, namely Ordinary Least Square, Two-Stage Least Square, Instrumental Variable Probit, etc. for articulating effects of NFI on poverty.

Chapter 02 dealt with theoretical background, literature review, related definitions/concepts adopted from different branches of economics (namely, rural economics, household economics, development economics, labor economics, micro-econometrics, etc.), and developed a certain systematic framework from individual participation in NFE to measuring their effects on household economy for the study. Therefore, the study could be considered a unique contribution to the discipline of rural economics. The contributions, especially, are characterized by (1) the broader definition of NFS, (2) analyses on both overall and sector-wise NFE, (3) approach to growth linkages of HNFES and (4) comprehensive effects of

NFI on household economy incorporating the aspects of non-farm production and education poverty.

After surveying the NFS and poverty in rural Bangladesh, Chapter 03 concluded that in the 1990s Bangladesh made a positive structural transition in the rural livelihood by shifting from farm sector to NFS, and the progress on reducing human poverty was faster than that recorded in the case of income poverty. However, in the early 2000s such structural change and poverty reduction were not impressive.

Chapter 04 justified the selection of case study area, described data collection and gave a brief on socio-economic characteristics of sample households.

After dealing with the determinants of NFE, Chapter 05 first found that the NFE could not be deemed “marginal” in the advanced villages of Bangladesh. Overall, the analyses confirmed the importance of gender and education as individual characteristics, remittance earners as a household characteristic for remittance employment. Estimated results also suggested that access to credit, access to organizations and remittance earners as household characteristics, growth centers and institutions as community characteristics were important for local employment. However, their effects were qualitatively and quantitatively different in terms of participation and intensity of participation in overall as well as sector-wise NFE.

Chapter 06 analyzed the determinants of NFI diversification. Despite having the greater role of the NFS in income diversification and household income increase, the NFI components did very little or nothing to reduce income inequality. Uneven access to local high return non-farm self-employment and out-country remittance employment would actually aggravate the income distribution. Econometric results gave important insights: Lower extent of local high-return HNFEs was a reality and landholding was crucially important for financing such enterprises. For high-return non-farm wage income and out-country remittance income, where the low-income earning households had a limited access, education was particularly important. Contribution of female in NFI was negligible. Social capital (membership with organization) and local institutions (numbers) working in the locality were not significantly active in promoting either local NFE or remittance employment.

Chapter 07 found that in relation to the limited scope of gaining income from farming and in-country remittance employment, the households` higher dependency on out-country remittance employment and local low-return NFE could be a threat for sustainability of local livelihoods. Thus, the increasing contribution of non-farm self-employment and non-farm wage employment by promoting HNFEs must be critically important. The study also found that the HNFEs were locally linked. The HNFEs that purchased input locally and sold output in distant markets might have a higher profitability potential. Sub-contracting with other enterprises and partnerships beyond household workers also enhanced the success of HNFEs. Finally, the chapter concluded: (1) the development of HNFEs was still at a lower stage (positive consumption linkages effect, but the marginal effect was not the highest); (2) the HNFEs were being capital intensive (positive backward linkages effect); and (3) in the overall economy the HNFEs related with agro-processing were still not effective (insignificant effect of forward linkages).

Chapter 08 concluded that small households in the advanced villages were in a stage that the NFI did not contribute significantly to household production economy for either farming or non-farming and food consumption (calorie adequacy); and accordingly, the NFI must have been spent on non-food consumption. Among NFI components, while out-country remittance income and non-farm self-employment income were reducing much the income poverty (incidence and gap) compared to non-farm wage income and in-country remittance income, the in-country and out-country remittance income were reducing the severity of education poverty.

Finally, the study concluded that the overall NFI significantly mattered for reducing income poverty but not for education poverty. Such conclusion could draw attention to the development partners in Bangladesh and other similar developing countries.

Based on the empirical findings, the future NFS development strategy should be aimed at as follows:

- Productive use (preferably in farm/non-farm production and demand driven education) of NFI at household level.
- For the low income household workers, access to the local high-return NFE and out-country remittance employment should be increased.
- Increasing female participation in NFE should deserve attention.
- With a view to strengthening forward linkages especially in high-return and demand creating ventures, micro/small-scale initiatives by the private sector and local institutions could be promoted.