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Measurement of Farm and Non-Farm Employment Linkages: Empirical Insights from Three Villages in Bangladesh

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Abstract

The widening of the rural-urban continuum has accelerated the transformation of agriculture in Bangladesh from subsistence towards commercialisation. This has been accompanied by improved employment and income options in the farm and non-farm sector. Modern rice and non-rice crop production together with livestock, poultry and fishery enterprises contribute to employment generation through backward and forward linkages.

This field study at three locations – (i) the peri-urban fringe, (ii) near a rural town and (iii) near a rural market place – measured farm to non-farm employment linkages for two major rice crops – Aman (wet season) and irrigated Boro (dry season). The concepts and estimates of linkages are discussed and their magnitudes are determined using year-round household survey data on detailed, activity-wise labour inputs into diverse farm and non-farm segments of employment. Since Boro rice, compared to Aman rice, gives higher yields but also requires higher application of improved technology, the employment linkages were found to be stronger for Boro than for Aman rice. The estimated backward, forward and total linkages were calculated at 0.18, 0.43 and 0.61 for Boro rice and 0.14, 0.39 and 0.53 for Aman rice. For these two crops as a whole, the farm to non-farm total employment linkage coefficient was 0.58, which means that a total of 100 man days of farm employment in production activities generates 58 man days of non-farm employment in various support services, processing and marketing activities.

The main conclusion is that the green revolution driven production systems, especially rice, lead to a vibrant non-farm development in a dynamic setting. The findings imply that more investment in the intensification of rice-based production system would not only lead to food security at the farm level but it would also significantly increase productive non-farm employment opportunities. From a national policy perspective, more research and development efforts should go into accelerating potential rural growth and non-farm sector development such as input delivery, marketing, farm mechanisation, rural transport, and supply chain development.

Keywords: Backward and forward linkages, employment generation, farm and non-farm activities, farm mechanisation, green revolution, rural growth, supply chain