An Economic Study on the Efficiency and Welfare Impact of Modern Rice Production in Bangladesh

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ABSTRACT

Bangladesh government needs to formulate (implement) an appropriate rice policy for achieving rice self-sufficiency for sustainable food security and poverty alleviation. As such, the present study aims to investigate how Bangladesh government can achieve policy target such as global comparative advantage in rice sector and sustainable food security. This dissertation comprises six main chapters. The introductory chapter presents the background of the study, followed by the discussion on research topics and originality of the study along with the organization of the dissertation. Chapter II provides the present conditions of the rice sector in Bangladesh. This chapter describes the importance of rice sector in Bangladesh economy, research and development (R&D) of rice sector, rice sector development policies, and dissemination of modern rice varieties (MVs) and productivity changes over time in Bangladesh. Chapter III examines the comparative advantage and cost efficiency of rice-producing farms in Bangladesh. This chapter attempts to investigate whether Bangladeshi rice has comparative advantage, and whether the impacts of abolishing fertilizer subsidy program and the scope of improvement in cost efficiency could further re-establish the comparative advantage. Chapter IV focuses on whether share tenancy contracts affect the economic efficiency in rice production during the wet season in Bangladesh. The prevailing share tenancy systems appear to have contributed to cost inefficiency in rice production during the wet season. Because, wet season rice production in Bangladesh shows no comparative advantage, while improvements in cost efficiency could re-establish these advantages. Therefore, if policymakers/government (i) increase job opportunities for the poor tenant farmers in non-farm sectors, (ii) offer some micro insurances to the village poor including crop-share tenancy farmers, (iii) develop and disseminate different stress tolerant crop varieties to address the unstable production caused by climate change, and (iv) increase crop diversification in the dry season, then it can increase the annual income and make it possible for farmers to reduce crop-share tenancy contracts. Chapter V investigates the heterogeneous impacts of modern rice adoption in the wet season on the welfare of the small, medium, and large-scale farmers and examines the current rice sector development policies in Bangladesh. Analysis further revealed that, the potential gains from improved rice technology are lower for the smallest farmers, while they are higher for the larger farmers. Directly achieving production enhancements by the larger farmers may have an important causal impact in terms of household welfare and poverty reduction. Furthermore, as the non-agricultural sector has been developing considerably in the South Asian countries including Bangladesh, the government should further emphasize on the creation of employment opportunity for the surplus agricultural workers in the non-agricultural sector for improving the welfare of the poorest group of farmers. Therefore, the current rice policy might be supported to help to Bangladeshi rice sector for achieving food security in Bangladesh. Finally, the major findings of the study are summarized in Chapter VI. This chapter also provides conclusions of the study as well as the policy implications that would be immensely helpful for the Bangladesh Government improve its rice sector.

Key words: Input subsidy, Comparative advantage, Cost efficiency, Crop-share tenancy, Modern rice varieties, Poverty