

## Efficiency and Factors Affecting Inefficiency in the Previous Enclaves of Northern Region of Bangladesh: An Analysis of SFA and DEA Approach

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**Abstract :** After 68 years, the agreement between Bangladesh and India was ratified on 6 June 2015 and Bangladesh received 111 Indian enclaves. Millions of farm household lived in these previous enclaves, being detached from the mainland of the country, they were socially, economically and educationally deprived people in the world. This study was undertaken to compare of the Stochastic Frontier Analysis (SFA) and the constant returns to scale (CRS) and variable returns to scale (VRS) output-oriented DEA models, based on a sample of 300 farms from the three largest enclaves of Bangladesh in 2017. However, the aim of the study was not only to compare estimates of technical efficiency obtained from the two approaches, but also to examine the determinants of inefficiency. The results from both the approaches indicated that there is a potential for increasing farm production through efficiency improvement and that farmers' age, educational level, new technology dissemination and training on crop production technology have a significant effect on efficiency. The detection and measurement of technical inefficiency and its determinants can be used as a basis of policy recommendations.

**Keywords :** DEA approach, previous enclaves, SFA approach, technical inefficiency

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