

PROFIT EFFICIENCY IN SMALLHOLDER RAINFED PADDY FARMING: A CASE OF *HORANA* DIVISIONAL SECRETARIAT DIVISION IN *KALUTARA* DISTRICT

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Abandon paddy lands is a major issue in the wet zone paddy farming. Although successive governments have taken several measures to cultivate abandoned paddy fields in the wet zone, the progress is unsatisfactory mainly due to low profitability. Hence, it is necessary to identify major drivers for enhancing profitability so that measures can be taken to maximize profit. This study aims to investigate the profit efficiency of smallholder rainfed paddy farmers in Kalutara district, the highest paddy producing district in the wet zone of Sri Lanka. Using three stage random sampling approach 54 paddy farmers were selected for data collection. The *Cobb-Douglas* stochastic frontier profit function was employed to determine factors affecting profit efficiency and the level of efficiency. The frontier profit function found that land extent, pesticide use, transport and machinery use have a significant positive relationship with profit ($p < 0.01$) while use of fertilizer has significant positive impact on profit efficiency ($p < 0.10$). The reason for low investment might be the risk involved in rainfed agriculture. Further, the profit inefficiency function found that a 10% increase in level of education would result in 15% decrease in profit inefficiency. Similarly, experience of paddy farming and extension reduces profit inefficiency significantly ($p < 0.01$). The results revealed that the average profit efficiency in the study area was 77.75%, which implies that 22.25% improvement in efficiency could be achieved without any increase in costs. This can be done by improving both technical efficiency and inefficiency factors. The study concludes low profit efficiency in rainfed paddy farming in Kalutara district is mainly due to both efficiency and inefficiency factors. The study recommends increasing farm size through land consolidation (*yaya* program, group farming), mechanization, promoting educated youth to enter paddy farming and setting up an efficient extension service to increase profit efficiency whereby the development of rainfed agriculture.

Keywords: Abandoned paddy lands, *Cobb-Douglas* profit function, Stochastic frontier analysis, *Yala & Maha* seasons