Technical Efficiency of Black Tea Production

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Abstract

This research has taken effort to identify the important socio economic determinants of the black tea production in Uva region and to estimate the technical efficiency of black tea production in the Uva region of Sri Lanka. A structured questionnaire was designed and then pretested with selected respondents. A total of 35 tea producers were randomly selected from the database managed by Tea Research Institute of Uva region. The data were analyzed within the framework of Cobb-Douglas production function and stochastic frontier production function by using the STATA 10 and FRONTIER 4.1 c. The results revealed that the extent of tea land, capital, VP/UVA 945 and agrochemicals cost were significant and increase the black tea production by 0.245, 0.242, 0.013 and 0.076 percent respectively. The results revealed in inefficiency model that experience and education were significant and experience increase the black tea production by 0.079.This can be explained by most of the experienced farmers used traditional varieties for their cultivation that may be reduce the yield of tea.Education was manifested a significant negative impact and decrease the black tea production by 0.017. The negative and significant coefficient for education suggests that the educated farmers are more efficient than others.The mean technical efficiency of Uva region estates were estimated to be 88 percent and this was manifested that the Uva region estates still have room for the improvements.

Keywords: Black tea production, technical efficiency, ordinary leased square method, Stochastic Frontier production approach