Technical efficiency of pepper farms in Sarawak, Malaysia: an application of data envelopment analysis

ABSTRACT

This study is carried out to analyze the performance of pepper farms in Sarawak by estimating the level of technical efficiency and to identify the determinants of technical efficiency of pepper farms. Data Development Analysis (DEA) method were applied to estimate technical efficiency levels and Tobit analysis were used to investigate the determinants of technical efficiency of pepper farms. A sample of 678 pepper farmers was chosen for this study through field survey that was conducted from August to December 2009. The results show that the mean of technical efficiency under constant returns to scale (CRS) and variable returns to scale (VRS) were 0.567 and 0.661, respectively. Meanwhile, efficiency in farm management is positively and significantly influenced by education level, the frequency of contacts with extension agents per year, being member of farmer's association, being full-time pepper farmers, and joining farming courses and study visits.