

Technical Efficiency of Small-Scale Honey Producer in Ethiopia: A Stochastic Frontier Analysis

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Abstract : Ethiopian farmers have a long tradition of beekeeping and the country has huge potential for honey production. However traditional mode of production still dominates the sub sector which negatively affect the total production and productivity. A number of studies have been conducted to better understand the working honey production, however, none of them systematically investigate the extent of technical efficiency of the sub-sector. This paper uses Stochastic Frontier production model to quantifying the extent of technical efficiency and identify exogenous determinant of inefficiency. The result showed that consistent with other studies traditional practice dominate small scale honey production in Ethiopia. The finding also revealed that use of purchased inputs such as bee forage and other supplement is very limited among honey producers indicating that natural bee forage is the primary source of bee forage. The immediate consequence of all these is low production and productivity. The number of hives the household owns, whether the household used improved apiculture technologies, availability of natural forest which is the primary sources of nectar for bees and amount of land owned by the households were found to have a significant influence on the amount of honey produced by beekeeper. Our result further showed that the mean technical efficiency of honey producers is 0.79 implying that, on average honey producer produce 80 percent of the maximum output. The implication is that 20 percent of the potential output is lost due to technical inefficiency. Number of hives owned by a honey produces, distance to district town-a proxy to market access, household wealth, and whether the household head has a leadership role in the PA affect the technical efficiency of honey producers. The finding suggest that policies that aim to expand the use of improved hives is expected to increase the honey production at household level. The result also suggest that investment on rural infrastructure would be instrumental in improving technical efficiency of honey producer.

Keywords : small-scale honey producer, Ethiopia, technical efficiency in apiculture, stochastic frontier analysis

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