

Robust efficiency and output elasticity of broiler production in Peninsular Malaysia

ABSTRACT

This study investigates issues on efficiency and elasticity of broiler production in Peninsular Malaysia. Data from 296 broiler farms were subjected to SFA, DEA and bootstrap methods for technical efficiency; Translog and Tobit regression analyses to estimate elasticity of production and determinants of efficiency respectively in broiler production. We found that farmers produce mean efficiency of 94, 95 and 97% with robust for small, medium and large scale farms respectively. Apart from inefficiency, we also found evidence that minimal bias/noise exists in broiler production. Relative to output elasticity, we observed an inelastic relationship in feeds but an elastic relationship in DOC, medications and utilities. Most of the socio-economic attributes (experience, age, education, business status and number of farms) show highly significant statistical relationship with efficiency and with appropriate signs. To ensure production at higher marginal returns and lower marginal costs, farms operating under increasing returns to scale should scale-up production while those producing at decreasing returns to scale need to scale-down production. The study also advocates to farmers to embrace adequate training/better education, contract farming and ownership of fewer number of farms in order to enhance efficiency, productivity and sustainability of the broiler industry.

Keyword: Bias; Bootstrap; Technical; Tobit; Translog