TECHNICAL EFFICIENCY IN GROUNDNUT PRODUCTION IN MALAWI:  
AN APPLICATION OF A FRONTIER PRODUCTION FUNCTION

A. K Edriss¹ and F. Simtowe

ABSTRACT
A multistage stratified random sampling method was used to collect a sample of 200 farmers from Lilongwe and Salima Agricultural Development Division (ADDs) in central Malawi, where over 70% of groundnut production takes place in the country. Technical efficiency models, a deterministic frontier production function and a technical efficiency regression model, were fitted to the data with particular interest identifying major physical and non-physical factors that determined the level of technical efficiencies or inefficiencies in groundnut production in Malawi. Of the physical factors used in the model, only land and seed density (proxied to capital) were found to be statistically significant (p<0.001) in determining efficiency of groundnut production. Though not statistically significant (p>0.1) in influencing efficiency of groundnut production, the non-physical factors—education level of farmers, age of household head, sex of household head, family size, off-farm employment and number of contacts with extension workers had shown positive association with technical efficiency in groundnut production in the region. The technical efficiency indices ranged from a minimum of 0.31 to a maximum of 0.68, with an average of 0.496. About 75% of the smallholder farmers were falling below the average technical efficiency index of 0.496, indicating that considerable technical inefficiencies exist in small groundnut farms in Malawi.

¹ University of Malawi, Bunda College of Agriculture, P.O. Box 219, Lilongwe, Malawi