

**Women empowerment, technical efficiency and market participation: a study of  
smallholder rice farmers in kilometre district, Tanzania**

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**Philosophy (Economics)**

**University of Dar es Salaam, College of Social Sciences, 2019**

This study examines women empowerment, technical efficiency and market participation by smallholder rice farmers in Kilombero using the Women Empowerment in Agriculture Index (WEAI). For the study site, the overall WEAI is estimated at 0.54 and the determinants of women empowerment for female headed households are; age of the household head, education level, group membership, condition of dwelling and distance from the nearest major town, all of which have a positive association with women empowerment while monthly income has a negative association. For the male headed households; age of the husband and number of male children have an association with women empowerment. The study also analyzes technical efficiency of production using the stochastic frontier analysis. Findings indicate mean technical efficiency scores of 0.50 and 0.66 for female and male headed households respectively. The factors that affect technical efficiency are empowerment of the women; gender, primary occupation, group membership and education level of household head and, fertilizer use in production. In examining market participation, a double hurdle model is used with findings indicating that being a male household head, group membership of household head, hiring labour, empowerment of the woman and ownership of modern equipment have a positive effect on the decision while, irrigation and customary land ownership have a negative effect on the decision to market. Plot size, education, age squared, ownership of modern equipment has a positive effect on quantity marketed while age has a negative effect on quantity marketed.