

The Impact of Agriculture Technology Adoption on Farmers' Welfare in Uganda and Tanzania

Bethuel Kinyanjui Kinuthia,

School of Economics, University of Nairobi and the Institute of Research on Economic Development (IREED), Nairobi, Kenya

P.O.BOX 30197, 00100. Email: bkimuthia@uonbi.ac.ke; bkimuthia@iredafrica.org

&

Edward Mabaya

Cornell University, New York, USA

Abstract

The paper looks at the determinants of technology adoption and how this affects farmers' welfare measured by consumption expenditure in Uganda and Tanzania. The study uses panel datasets based on the Living Standards Measurement Study-Integrated Surveys on Agriculture for the period 2005 to 2015. To do this, we use both a probit and linear probability model for the determinants of improved new seeds varieties. In addition, the impact of technology of welfare is based on endogenous switching regression. This helps us to control for selection problems on production and adoption decisions. The determinants of both countries include farm size, contact with government agencies, number of improved seed varieties and credit. However, there are determinants that are specific for each country. The results for the impact of improved new seeds varieties on welfare, show that households that use improved new seed varieties tend to be different from those that do not. They also have higher consumption expenditure. The results show the potential of improved seeds varieties in helping households in especially in rural areas increasing their welfare.

Keywords: Household welfare, Technology adoption, Sub-Saharan Africa, Uganda, Tanzania, Endogenous switching