



Tropentag, September 17-19, 2018, Ghent

“Global food security and food safety:  
The role of universities”

## Skill Development, Human Capital and Economic Outcomes: impact of Post-secondary Education among African Smallholder Farmers

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### Abstract

It is widely recognised by development scholars and practitioners that human capital and skill development are significant determinants that could positively affect farmers' performance and their disposition to adopt innovations. Education (general, as well as specific agricultural education and training), is argued as vital to overcoming development challenges in rural areas. More than 70 per cent of the poor people in Africa live in rural areas and engage in smallholder agriculture for food and livelihood. Yet majority of them are poor, have very low levels of education, and are faced with precarious food and nutritional insecurity. This study seeks to not only assess the impact of post-secondary education on short-term outcomes (use of agricultural inputs—improved seeds, fertilisers, access to credit facilities (loans)), and intermediate economic outcomes (consumption expenditure, and poverty), but also assesses the returns to and distributional effects of post-secondary education among farmers in four countries in SSA Africa (Ethiopia, Malawi, Nigeria and Tanzania). While using novel nationally representative panel data and a variety of estimation techniques, results are rather robust and indicate that post-secondary education significantly increased total household (aggregate) consumption expenditure and per capita consumption expenditure. Specifically, post-secondary education increases consumption expenditure by 12.5 % in Tanzania, 18.4 % in Malawi, 22.6 % in Nigeria and 27.6 % in Ethiopia. Results further show that post-secondary education significantly reduce household poverty by 35.7 % in Ethiopia, 42.5 % in Malawi, 54.4 % in Tanzania, and 47.5 % in Nigeria. We also use quantile regression techniques to estimate not only the mean returns to post-secondary education but also distributional effects. Overall, our results show positive economic effects of post-secondary education significantly, and thus augment the conclusion that schooling have positive impacts for the farmers and their households' well-being. Our findings are of policy relevance to most SSA countries currently grappling with rising urbanisation, high youth unemployment, and acute skills shortage.

**Keywords:** Post-secondary education, skill development, smallholder farmers , vocational training