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Effect of contract farming on farm productivity among sorghum farmers in Dodoma, Tanzania: Endogenous switching regression

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Abstract

Despite the importance of sorghum production and its increased market demand in the sub-Saharan region of Africa in recent years, a significant number of smallholder farmers still face issues of low and poor yields, lack of reliable markets, low grain prices and low-income levels. Following the strategic focus of the national development five year (2018–2024) strategic plan by the Government of Tanzania that is in line with the Africa Agenda 2063 on transforming Africa’s agriculture into modern one, strategies as contract farming are designed and implemented in the country to solve agricultural problems among smallholder farmers. It is thus important to evaluate the impact of such strategies especially in developing countries. This study analyses the effect of CF in sorghum production using the cross-sectional data collected from 400 smallholder sorghum farmers in Tanzania. The estimation model that was used for analysis was the endogenous switching regression, and findings show a positive and significant relationship between CF and farm productivity. Moreover, findings identified location, age, household size, hired labour, a family-hired labour mix, own land use, own and rented land use under production, access to extension services, access to financial services and number of groups per village as determinants of CF participation among sorghum farmers. Therefore, it is evident that CF is among vital strategy in sorghum production as it has enhanced higher farm productivity levels among contract farmers compared to noncontract farmers. Furthermore, it is important that policies to emphasise CF and stakeholder partnerships along the sorghum value chain to be prioritised.

Keywords: Contract farming, endogenous switching regression, farm yield, sorghum, Tanzania