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Impact of Agricultural Market Linkages on Small-scale Farmers’ Welfare: Evidence from Tanzania

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Abstract

Subsistence agriculture practised by small-scale farmers (SSFs) is still pervasive in low-income countries (LICs); in Tanzania it plays an important role for food security and income generation in rural areas. In addition to subsistence, the backbone of the local economy is composed by industrial processing of agricultural raw materials, forming the wider agro-industrial sector. In the transition and evolution of food systems, an important step up from subsistence production has been the integration of SSFs into output markets through the strengthening of agricultural value chains – with the potential to lift millions out of poverty. This paper focuses on Tanzania to study how SSFs’ participation in vertical market linkages (VMLs) increases household welfare. We contribute to the literature of agricultural economics in two ways. First, by considering a wider variety of welfare indicators (income, poverty, food security, and subjective well-being) in addition to crop yield and commercialisation. Second, by analysing the heterogeneous welfare effects of different VMLs: the first composed by contract farming and cooperatives, the second by processors. The study uses a country-wide representative balanced panel from Tanzania (NPS-LSMS) and employs the fixed effects and the first differences estimators to control for unobserved household time-invariant characteristics. Additionally, propensity score matching (PSM) is used in tandem with these two methods in order to reduce selection bias of farmers; PSM is also employed as a robustness check by estimating average treatment effects. Our main result is that integration to VMLs increases household welfare for all outcome variables in the processors’ VML group and less so in the outgrowers’ group. However, direct production and income gains do not always convert into better final welfare, including food security. Our findings complement the literature of welfare effects of agricultural markets’ integration by showing how different VMLs can improve the lives of SSFs in Tanzania, a case study whose characteristics are also present in similar LICs. We believe that there is scope for further research into the benefits that agricultural value chains can effectively bring to SSFs in the developing world.

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