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Influence of institutional arrangements on the choice of vertical coordination strategic options in the sorghum supply chain in Kisumu county, Kenya

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Abstract

Vertical coordination in agriculture has received popularity in recent years. They have emerged to transform farm enterprises from subsistence farming to commercial-oriented sorghum production for industrial use. Drivers motivating farm enterprise owners to engage in the different vertical coordination strategic options were not clear in the literature. Institutional arrangements were hypothesised to play a role alongside the socio-economic and institutional factors. The study bridged this gap by characterising the institutional arrangements and determining the effects of institutional arrangements on the choice of vertical coordination strategic options. A stratified sampling technique was used to randomly select 266 sorghum farm enterprise owners in Nyando Sub-county, Kisumu County. Descriptive statistics and Multivariate probit model were used in data analysis. Descriptive statistics revealed that the majority of the sorghum producers targeted coordinated options especially contractors and processors. The results justified that the choice of spot market was influenced by a young age, more sorghum experience, less farm sizes, fair price expectation, less payment delay, more bargaining power, transportation disarrangement, distance to the collection point and grade uncertainty. The choice of contractors was influenced by less farm sizes, quality inspection, payment delay, more bargaining power, transportation arrangement, distance to the collection point and less technical support. For sorghum producers choosing processors, off-farm income, more land size, lesser payment delays, less bargaining power and transportation disarrangement influenced their choice positively. The study recommended the use of standardised quality grading systems, price premiums for producers due to delayed payments and reasonable ways of sharing risks between the actors in order for them to access and utilise the new, lucrative and emerging cereal markets.

Keywords: Institutional arrangements, supply chain, vertical coordination, vertical coordination strategic options