Market access and its effect on citrus fruit production in Uganda

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Abstract

Sustaining success in productivity-based agricultural growth depends on expansion of market opportunities. However, limited attention has been directed towards marketing strategies of Uganda's horticultural produce which is one of the fastest growing non-traditional export sectors in the economy. This study aims to assess the domestic, regional and international marketing of citrus in Uganda.

Key words: Citrus, marketing strategies, Uganda

Résumé

Soutenir la réussite dans la productivité basée sur la croissance agricole dépend de l'expansion des opportunités du marché. Cependant, une attention limitée a été orientée sur des stratégies de vente du produit horticole de l'Ouganda qui est l'un des secteurs non traditionnels d'exportation le plus rapidement croissants dans l'économie. Cette étude vise à évaluer la commercialisation sur le plan local, régional et international de l'agrume en Ouganda.

Mots clés: Agrume, stratégies de commercialisation, Ouganda

Background

Due to the potential the horticultural sector has in the development of Uganda's economy, the Uganda Government put in place measures to support its growth through the Plan for Modernization of Agriculture (PMA) by promoting several enterprises aimed at diversifying and commercialising agriculture. Today citrus fruit farming is one of the crop enterprises being supported and promoted through National Agricultural Advisory Services (NAADS), one of the implementation arm of PMA. Consequently, significant increase in production is being realized, while less attention has been given to examining implications of market imperfections which, in addition to affecting input use, affect investment and diversification of activities. Currently, the Government is grappling with effective farmer participation in, and access to markets as large volumes of citrus fruit have been observed to perish in farmers' fields due to lack of market (PMA, 2009).

In the case of Uganda, generally only limited research has been done on marketing of horticultural produce and citrus fruits. This study, therefore, aims to: (a) determine the effect of structural, socio-economic factors and agricultural policy on citrus fruit domestic, regional and export market access, (b) determine the citrus fruit value chain and quantify the associated costs, and (c) establish the effect of market access on citrus fruit productivity.

Literature Summary

Various studies have shown that improvement in market access increases agricultural productivity by facilitating specialisation and exchange transactions in rural areas (Freeman and Salim, 2002). Availability of rural roads has been reported to improve farmers' access to markets in Kenya (Kamara, 2004). In Pakistan, inadequate infrastructure and ineffective marketing practices resulted in high post-harvest losses and decline in quality, profitability and export of citrus (Tahir, 2004). It has also been shown that a relationship exists between market information and smallholders' participation in the market (Mabota *et al.,* 2003). Access to information and markets has been found to be facilitated by extension through farmers associations, capacity building, empowerment and creation of democratic institutions (FAO, 2002). Kamara (2004) applied a three stage least squares model on cross sectional data involving 100 farmers and found that a 10% improvement in market access lead to 1.7% improvement in productivity. The present study will evaluate such association in the citrus industry in Uganda.

Study Description

The study will be carried out in four districts in the Kyoga Plains Agricultural Zone in Eastern Uganda where citrus fruit growing is an activity of great importance. Two subcounties will be selected per district using cluster sampling criteria. The sample size will be determined using the formula: $n = \dfrac{Z(1-p)p}{e}$ - where n is sample size, Z is confidence interval, p is prevalence proportion and e is acceptable error. Sample selection will be done by using stratified sample and simple random sampling criteria. Stratification will be done at district and sub-county level and simple random sampling will be applied at respondent level.

Three (3) seasons' panel data will be collected during the 2nd harvesting season of 2010 (September - December 2010), and 1st (March - June) and 2nd (September - December) harvesting seasons of 2011. A pretested structured questionnaire will be

used to collect information on gender of household head, literacy status of household head, average quantity produced, markets where produce is sold, distance to market (km), quantity sold per market (kg), price per market (Shs., 1 US$ = approximately shs. 2,200=), number of transactions per market, mode of transport to the market, access to market information, source of market information, players in the market, institutional membership and policies related to production and trade on agricultural produce (citrus). In addition, an interview guide will be used to collect data from traders and processors and during focus group discussion at the innovation platforms.

To determine the effect of socio-economic variables on market access, Least squares dummy variable (LSDV) fixed effects model will be used to estimate the unknown parameters (Y_{it}

$$= \sum_{n=1}^{4} \alpha_i \, A_i + \sum_{n=1}^{k} \beta_j \, X_{it} + \mathring{a}_{it})$$

In this model, dummies will be introduced to capture the group (subcounty) effects which will be part of the a_i intercept term. This will help to determine the differences across units. In addition, descriptive statistics; means and percentages will be generated, and used to describe the main features of citrus fruit value addition activities from farm to final consumer hence addressing the objective of value chain analysis. Finally, a Cobb-Douglas production model will be estimated using SPSS to provide parameter estimates that will be used to explain the effect of market access on production. The outputs obtained from the analyses will be summarized in tabular format and conclusions drawn from the statistical summaries.

Research Application

Simple brochures will be developed to act as guides for market information acquisition and simple value addition procedures. In addition, two papers and a thesis will be published from the study. Findings of the study will also be disseminated through presentations at various fora.

Acknowledgement

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