

## Chapter 10

# Effect of Access to Formal Market Information on Prices Received by Smallholder Farmers in Uganda

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### ABSTRACT

*Much work has been done to improve smallholder farmers' adoption of new agricultural technology packages in Uganda; however, little commensurate effort has been made to improve their access to formal market information channels like mobile telephony, FM radio stations, Internet, and other information centers. This study is based on data obtained in 2006 from farmers affiliated to Uganda Cooperative Alliance and those who are not; however, both cohorts are located in the districts of Mukono and Masaka. Findings show that households in more remote locations are less likely to use formal channels, and conversely, perception of reliability of the information, membership in a farmers' group and commercial orientation of the farmer, all increase the likelihood of their use. The authors' findings indicate that farmers who have access to information from formal channels consistently obtain higher farm-gate prices than those who obtain information from informal channels.*

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## INTRODUCTION

A lot of work has been done to improve smallholder farmers' adoption of new agricultural technology packages in Uganda. However, little commensurate effort has been made to improve farmers' access to formal market information services. Therefore, farmers do not only need advice on how to grow new high-yielding or drought resistant crops, but also need market information on when, where and which quantities to supply and at what prices. Thus the need to improve farmers' access to formal market information services is very important. Low incomes for farmers, higher costs to consumers, greater risk for traders, high transaction costs, high wastage and low competitiveness in most commodity markets in Uganda are in part attributed to the lack of market information (MFPED, 2002).

Market information must have value to make it worth seeking by farmers. It is only when market information is of value that smallholder farmers will seek it and use it, and even try new media like the internet to access it. The first objective of this study is therefore to examine the factors that contribute to the likelihood of a smallholder farm household participating in formal market information services in the case of Uganda. In other words, the study seeks to determine the major factors that may hinder or facilitate the adoption of ICT-based services in a developing country setting. To the best of our knowledge there are no known studies in Sub-Saharan Africa that explicitly determine the factors that affect the probability of smallholder farm household participation in the use of ICT-based formal market information services. These services include those provided by farmer groups or market information centers through media such as radio, mobile phones, internet facilities, etc. This study then examines the impact of adoption of ICT-based market information services on the welfare of smallholder farmers. Thus the second objective of this study is to determine the impact of the access to formal market information services

on the level of farm-gate prices received and gross returns realized by smallholder farmers in Uganda.

Several studies in the literature as indicated below show that access to market information improves the prices received by smallholder farmers. However, these studies do not attempt to determine the drivers of adoption of ICT-based market information by the farmers. These studies also do not take into account the fact that the access to market information variable, used in their outcome models, is endogenous which is not addressed in their estimations. In our study we take care of this endogeneity problem in a two stage estimation and also address sample selection bias in our outcome models. In addition, the media or channel of market information used in most of the studies below is either radio or telephone alone, whereas our study examines access to formal market information through several channels, that is, mobile phones, radio and internet services from a telecentre. This study contributes to the existing literature in developing countries, especially, Sub-Saharan Africa. In the next section below we review some of the literature that examines the impact of access to market information on economic development in general. This is then followed by a simple exposition of the empirical model used in our study and thereafter a discussion of the results and finally the conclusions.

## The Literature

Eggleston et al. (2001) indicate that farmers need price information for several main reasons. First, relative prices inform the farmer on what mixture of crops to produce or the price of a given crop tells them how much to produce if it is a single crop. Second, prices enable the farmer to purchase inputs when and where they are cheapest or alert them to the existence of inputs that would profitably boost their production. Third, price information allows the farmer to know where to sell their output and the appropriate price to accept, thus avoiding exploitation by traders, brokers or middlemen.

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