MARKETING OF AGRICULTURAL PRODUCTS AND THE USE OF MOBILE PHONES AMONG FARM-HOUSEHOLDS IN GHANA AND UGANDA: A SURVEY

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Abstract. New market information systems and services based on mobile communication technologies create opportunities to reduce the cost of linking buyers and sellers, thus developing opportunities to reduce poverty. Because market situation changes constantly, it is particularly important to have up-to-date information on the markets. The goal of this study was to examine how small-scale farmers in Ghana and Uganda use marketing channels, what is the choice of buyers and how they use mobile phones to obtain market information. Similar farm-household surveys were carried out separately in Ghana (1290 households) and Uganda (1440 households) in 2011-2012. Each household was visited by an enumerator collecting information on household’s demographic characteristics, assets, marketing patterns and incomes. The results suggest that surveyed farm-households in Ghana and Uganda had a good choice of buyers for their agricultural products. The price of product and the payment conditions were key factors determining the buyer. Although majority of farm households owned a mobile phone, they were not widely used to obtain market information. Hence, mobile technologies have the potential to generate additional income to farm households in these countries.

Key words: Market access, farming, Africa, mobile phone use.

INTRODUCTION

The performance of local markets plays a decisive role in promoting economic growth and reducing poverty in Africa. Improvements in infrastructure and market performance are important when providing small-scale farm households with better opportunities to gain income. An important aspect related to the markets is farmers’ fair access to markets, which includes the process of finding buyers to the products, finding price information and negotiating prices. Because market situation changes constantly, it is particularly important to have up-to-date information on the markets.

More efficient market information systems can reduce agricultural marketing margins and price volatility and increase prices that farmers are able to receive upon selling their products. New market information systems and services based on mobile communication technologies create opportunities to reduce the cost of linking buyers and sellers, thus developing opportunities to reduce poverty. Previous studies have shown that such mobile technologies have, at least in some markets, the potential to benefit farmers [e.g. 1, 2]. The goal of this study was to examine how small-scale farmers in Ghana and Uganda use marketing channels, what is the choice of buyers and how they use mobile phones to obtain market information.

MATERIALS AND METHODS

Similar farm-household surveys were carried out separately in Ghana and Uganda. The surveys covered 1290 Ghanaian farm-households which were selected by stratified random sample of northern Ghana, and 1440 Ugandan farm-households which were selected by stratified random sample from 8 purposively selected districts. In Ghana the survey was carried out in October-December 2011. In Uganda the survey was carried out in September-December 2012.

To collect the data, each household was visited and interviewed by an enumerator. For each household, they collected information on issues such as education and literacy, main and secondary activity, land use, crop mix, the use of inputs and the ownership of production assets, yields to each crop and animal type, non-farm activities, access to credit, access to mobile phones, household decision-making, participation in community organizations, and allocation of time. The data were summarized and descriptive statistics were produced.
RESULTS AND DISCUSSION

The survey results suggest that in both countries, the median farmer sells slightly more than one-third of their crop output. In both countries, about 90% of sales are to traders, with consumers accounting for most of the rest. Direct sales to processors, exporters or supermarkets are rare in both countries. Also cooperatives play a negligible role in crop marketing in both datasets as less than ten per cent of interviewed farmers had ever sold their crop through a cooperative or a farm organization. In Uganda, most (84%) sales took place at the farm whereas in Ghana most sales (74%) involved the farmer bringing the product to market. These results may be due to the impact of smaller marketing revenues or lower population density in the northern Ghana than in Uganda.

Regarding the magnitude of crop sales, the data did not show clear distinction between “subsistence” and “commercial”. In Uganda, a median interviewed households sold 38% and in Ghana 34% of their crop production. In Uganda only 14% did not sell any crop products whereas in northern Ghana 28% of farmers did not have any crop sales. A large majority of interviewed farmers were able to choose between multiple traders. Regarding the main commercialized crop, 26% of Ugandan and 44% of Ghanaian households were able to choose at least among six buyers. Generally (55% in Ghana and 68% in Uganda) the buyer was selected based on the best price offer. Either the best price or the possibility of immediate payment was decisive criterion for altogether 85% farmers. Debt or other obligations were rarely mentioned as the criteria to choose the buyer.

A majority of farm households in both countries owned mobile phones (62% in Ghana and 72% in Uganda), but only about one-quarter of owners used it to gather market information. According to a probit model explaining the mobile phone ownership, households owning mobile phones tended to have more members, higher income, and more education than households not owning the phone. Sex of head of household was did not significantly determine the ownership after controlling for the effect of other factors. Less than half of farmers in both countries felt well-informed about agricultural prices, and this share was even smaller among small-scale farmers.

CONCLUSIONS

The results suggest that surveyed farm-households in Ghana and Uganda had a good choice of buyers for their agricultural products. The price of product and the payment conditions were key factors determining the buyer. Although majority of farm households owned a mobile phone, they were not widely used to obtain market information. Hence, mobile technologies have the potential to generate additional income to farm households in these countries.

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REFERENCES
