

Series F – Foundations : Information and Communication Technology

Digital Innovation for Building Liquidity for Agricultural Payments

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Key Messages

Digitizing payments from off-takers to smallholder farmers is a strong entry point for integrating digital financial services into agriculture value chains.

Digitized value chains create more efficient markets.

Demand exists for digitized payment ecosystem that allows savings and credit restricted for the purchase of agricultural innovations.

Agri-innovation wallet links smallholder farmers to buyers, input suppliers and credit, increasing farm productivity and incomes.

Context

The share of agriculture finance as a proportion of outstanding national credit remains below 5 per cent and shows little signs of improvement (CBK, 2015), despite several commercial and microfinance institutions in Kenya having established agribusiness departments. Some of the key barriers include the high risk associated with agriculture due to production and price risks; and lack of collateral and reliable data on smallholder farmers. The transaction costs incurred in reaching remote rural populations are also high. The decline in agricultural productivity in Kenya has been attributed to poor access to farm credit and financial services (World Bank, 2015). This gap hampers national efforts to ensure food security, improve livelihoods and spur the growth of the rural economy.

To address this challenge, improved access to rural financial services has been proposed (AGRA, 2015). Agri-innovation wallet, a promising solution to the problem, is a novel value chain financing option that links farmers, input suppliers, markets and the financial provider. It is an e-wallet platform that facilitates timely and efficient transactions. It targets the unbanked smallholder farmers in contract farming. The off-taker pays the farmer through the wallet and the farmer saves money restricted for the purchase of agricultural innovations. Input suppliers are also paid

through the system and if need be, farmers access overdrafts for the purchase of agricultural inputs. Digital financial services lower transaction costs making credit more available. A study was carried out to assess farmers' willingness to save and borrow funds through the agri-innovation wallet for the purchase of agricultural inputs. Specifically, the study sought to test and monitor the proportion of farmers who would purchase innovations with funds in their agri-innovation wallet and the effect of the innovation on agricultural productivity and the farmers' income.

Approach and Results

The project targeted tomato farmers in Makueni County and potato farmers in Nyeri, Nyandarua and Nakuru Counties. The potato farmers were specifically located in Naromoru, Olkalau and Keringet, respectively. Both the tomato and potato farmers were engaged in contract farming. A baseline survey was carried out before the implementation of the project to prepare baseline information on several indicators against which to the performance and impact of the programme would be assessed. The survey laid the foundation for attribution of results to the project interventions. End-line evaluation of the

Plate 1- Farmer using mobile-based service (Photo: Technoserve.org)



agri-innovation wallet project was undertaken to assess project outcomes and achievements.

Agri-innovation wallet enhanced savings and credit access for agricultural inputs. Results revealed that agri-innovation wallet enhanced convenience for saving and timely access to credit. This optimized decision making for increased productivity and income. It was found that the agri-innovation wallet savings contributed to yield increases of up to 18 per cent and 15 per cent in potato and tomato value chains respectively. Incomes increased by up to 155 per cent and 92 per cent in potato and tomato value chains, respectively.

Demand for saving and borrowing among smallholder farmers is unmet. The willingness to save and to borrow from innovation wallet among both tomato and potato farmers maintained an upward trend, corroborating the growing body of literature that affirms that Kenyan farmers are credit constrained. For example, in most cases, potato farmers depend on credit to procure certified seed. Thus, without credit, they would not be able to plant certified seed and therefore their yields would remain low.

ICT-based innovations are gaining popularity among smallholder farmers. Farmers are increasingly interested in using ICT solutions and innovations to meet their farming needs. The project experienced no difficulties or complaints about the use of mobile-based saving and borrowing. Thus up-scaling of the agri-innovation wallet technology is tenable since Kenya is a frontrunner in the uptake of mobile technology in Africa. The wallet proved adaptable due to its simplicity and affordability as farmers only required a

feature phone that is within reach for many smallholder farmers.

The value proposition of agri-innovation wallet is that it incorporates merchants, off-takers and financial providers within the same ecosystem. Digitizing payments from off-takers to their smallholder suppliers is a strong entry point for integrating digital financial services into agriculture value chains. Otherwise, smallholder farmers are likely to continue depending on cash which is costly to collect, to send and which can be stolen or misappropriated. Digital payments reduce the frequency of transactions improving transparency through quicker, traceable payments. The high volume of transactions in agricultural value chains creates a multiplier for any inefficiencies, such as cash payments. Digital payments facilitate access to financial services for smallholder farmers by lowering transaction costs, providing flexibility, and improving the customer experience as reflected in higher gains in yield and income.

Policy Recommendations

Short-Term

Appropriate electricity subsidies should be put in place to:

- Liberalize interest rates
- Build the capacity of self-regulating non-traditional agricultural finance (NTAF) under the Central Bank of Kenya
- Adopt a smart subsidies approach by only providing subsidies that support

the growth of the NTAF without distorting the market

Medium-Term

- Develop a rural finance policy that removes barriers to agricultural finance and promotes innovation.
- Integrate crop insurance for smallholder farmers within the Insurance Act.
- Incentivize NTAF through investment in infrastructures such as roads and power and network coverage in the rural areas.

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