INCLUSIVE INNOVATIONS

Enabling Connectivity with Multi-Stakeholder Platforms

HIGHLIGHTS

- Multi-stakeholder ICT platforms reduce information asymmetries along the value chain by enabling two-way communication between farmers and other stakeholders.
- These platforms facilitate management of out-grower schemes and contract farming models, thereby increasing the exportability of smallholder produce.
- Input suppliers, extension service providers, financial institutions, transporters, agro-processors, exporters, traders, governments, and NGOs can tailor their products and services to specifically suit smallholder farmer needs based on interactions with farmers on the platform.

Scott Wallace / World Bank

Development Challenge

Lack of communication portals that facilitate information and transaction exchange between stakeholders engaged in agricultural activities from planting to sale of produce, combined with an increase in food sustainability and compliance standards have minimized the opportunities for remotely located smallholder farmers to be included in global agricultural value chains. Farmers suffer from inadequate market linkages, both with input suppliers and with end buyers. Poor connectivity to markets impacts their incomes more directly and keeps them in a cycle of low investment, low productivity and low incomes. Even when there is information available, remotely located farmers have to incur high search costs, and therefore continue to operate without credible information.

Business Model

A number of enterprises have developed mobile- and web-based platforms that enable connectivity between various actors in the agricultural value chain. On these platforms, stakeholders can communicate with each other through SMS, voice calls, interactive voice response (IVR), call center, smartphone applications and online web-based portals. The platforms facilitate exchange of information and transactions between all registered participants. Typically, stakeholders register on the platform by paying a subscription fee. Enterprises earn a commission on every transaction made between farmers and other stakeholders on the platform. Most multi-stakeholder platforms are open group. Platforms specifically designed to support smallholder farm management are closed group; agribusiness clients select the stakeholders to register on the platform.

These platforms connect farmers with agribusiness agents through ICT and enable them to interact with each other on pre-harvest protocols, global food safety compliance standards, and use of inputs in line with these standards. For instance, Farmforce, which operates in 25 countries across Latin America, Africa and Asia, provides agricultural businesses, aggregators, cooperatives, exporters and agricultural processors the facility to connect with farmers and receive real-time information on pre-harvest activities through a centralized platform. Farmers can leverage these platforms to directly communicate with processors and quality assessment certifiers to enhance the value of post-harvest products. They can also directly engage with buyers and connect with transporters to deliver produce.

Features of Multi-Stakeholder Platform Business Models

Backward linkages	Forward linkages
• Enterprises have designed electronic platforms that connect smallholder farmers with input suppliers, financial providers, and agriculture experts to purchase products and services directly from these stakeholders • Enterprises have designed platforms that link contract farmers to small-scale farmers in order to improve management of pre-harvest operations and increase farm productivity. Farmers are provided electronic records of all transactions	• Enterprises have developed software platforms that allow smallholder farmers to directly communicate with post-harvest solution providers, value-addition service providers and buyers thereby creating market linkages • Most enterprises that provide digital platforms collect data that is further sold to government bodies and NGOs to understand post-harvest needs of smallholder farmers

Implementation: Delivering Value to the Poor

Awareness

Enterprises conduct training and education programs on the role of Internet and mobile technology in partnership with rural government agencies, NGOs and farmer co-operatives. They conduct training sessions for farmers and traders on effective market links and mentor traders in undertaking transparent trading without manipulating farmers. They broadcast their services on local radio, newspaper and market price information boards. Most enterprises involve local farmer leaders in spreading awareness about their platforms. Ricult identifies middlemen that farmers are comfortable trading with and train these middlemen in using the technology; the middlemen visit farmers and onboard them.

Acceptance

Prior to product design and deployment, enterprises invest time to understand pre-harvest and post-harvest support required by farmers, mobile and Internet penetration levels, local languages, and key participants in the value chain. Farmers are more receptive to platforms that allow two-way communication. For example, Farmforce works across Latin America, Africa and Asia. The enterprise offers its platform in English, Spanish, French and Portuguese to cater to farmers and agribusiness clients in these regions. WeFarm has a network of volunteer translators for international answers.

Accessibility

Multi-stakeholder platforms leverage technology to connect farmers with other agricultural stakeholders for real-time information and transaction exchange. Farmers are not required to travel to central markets for information on produce planning, market access or certification requirements. Ricult undertakes door step delivery of input commodities to farms; the enterprise also provides on-farm soil testing services. Other value-chain actors can provide information to farmers that enable them to produce commercial export quality crops.

Affordability

Multi-stakeholder platforms are typically free of cost for farmers. Some enterprises charge nominal rates in terms of SMS communication costs or commission on the sale of farmer's produce to buyers. Ricult offers a 30 percent discount to farmers on input commodities. Services to other stakeholders are also priced competitively in order to attract more customers onto the platform. Stakeholders also have the option to advertise their products and services directly to farmers, which is a cost-effective alternative in comparison to visiting remote locations to undertake marketing activities.

Initial technology development represents the largest capital cost borne by enterprises. Owing to the fast pace at which technology changes, coupled with the need to constantly enhance content on the platform, enterprises incur significant costs on maintaining their ICT platforms. Multi-stakeholder platforms differ from ICT extension platforms in that they enable connectivity among a larger set of agricultural vale-chain participants and provide two-way communication channels. Enterprises offering multi-stakeholder links on their platforms must necessarily on-board relevant stakeholders to the platform.

Enterprises that provide multi-stakeholder platforms earn revenues in different ways—through subscription fees, commission fees, third party license fees and fees based on revenue-share with partners. Enterprises price their services based on the customer segments as well as the services provided to clients, such as market information, or pre-harvest advisory, market access or produce tracking services.

Enterprises establish partnerships with mobile network providers, development organizations and government agencies for data collection, information dissemination and increasing their reach to farmers. Enterprises work with local government to reach remotely located smallholder farmers and build trust in using the platform. In collaboration with government agencies, they also provide training to farmers on internet and mobile use.

Results and Effectiveness

Multi-stakeholder ICT platforms support small-scale farmers by providing them a multitude of advisory services and market access links. Electronic receipts and record management lower the chances of discrepancies and errors in transactions.

Research studies and development organizations have conducted some impact studies on such platforms. For example, Esoko's farmers earned 20-40 percent more in income after using the platform. A study by USAID on farmers in the Kinangop region of Kenya using MFarms for collective selling showed that these farmers were able to receive more than double the price for certain types of produce, such as snow peas and sugar snap peas, than what they were able to receive when selling their produce individually. Feedback from farmers using the service has also revealed that access to current market information has given them a transparent bargaining platform when selling.

Improved traceability and smallholder farm management helps agribusinesses in facilitating farmers to receive global certifications and tracking compliance with food safety standards, thereby enabling an increase in income. Multi-stakeholder platforms also decrease information and market access search costs for farmers. An integrated system using a mobile phone platform that provides information from the planting stage to selling stage can significantly reduce information search costs and associated transaction costs.

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