

ICT in Agriculture

AgriFin (March 2013) | The following is a synthesis of Chapter 7: Broadening Smallholder Access to Financial Services (<http://www.ictinagriculture.org/sourcebook/module-7-broadening-smallholders-access-financial-services>), of the World Bank's ICT in Agriculture Sourcebook that may be accessed from the ICT in Agriculture website (<http://www.ictinagriculture.org/sourcebook/ict-agriculture-sourcebook>).

ICTs can enhance the delivery of a wide array of financial products to reach a greater number of agricultural clients. On the other hand, governments can also utilize ICTs to monitor and assess the quality of financial services delivered to rural clients. However, there are prerequisites to using ICTs to broaden access to agriculture finance. The two most important prerequisites are ICT infrastructure and financial infrastructure. ICT infrastructure, including high-speed Internet and mobile phones, must be widely available at affordable prices because it serves as “the backbone of electronic financial transactions.” Financial infrastructure includes “national payment systems, credit bureaus, ATM switches, or central platforms for microfinance institutions.” The two types of infrastructure need to be present in order to facilitate the expansion of financial services to rural areas.

The existence of ICT infrastructure and financial infrastructure is not enough. There are other key enablers that are needed to expand access to agriculture finance. First of all, governments need to ensure that its economic policy does not crowd out private investment. Policies that interfere with market pricing for example can be very costly and effectively distort the market system. Instead, the government must provide a supportive legal and regulatory environment with minimal political interference. One of the most important functions of the government is its capacity to enforce contractual obligations between lenders and borrowers. This in turn will minimize the risks of lending in the agricultural sector and eventually expand financial access. Another key issue is infrastructure costs and platform sharing. Investment in technology is risky and costly, thus the burden needs to be shared between the private and the public sectors to ensure ownership. Platform infrastructure sharing, such as sharing the use of power, telecommunication, data networks, or data management is very useful in driving down the cost of investment in technology, which will have the effect of making the use of ICTs more affordable.

Some examples of ICT-enabled financial services for the rural sector include mobile financial services, branchless banking, ATMs, and smartcards. The benefits provided by ICTs include, but are not limited to, the following:

1. ICTs can improve the availability and transparency of financial services. Besides making financial services more readily available in underserved areas, electronic banking also promotes transparency and accountability precisely because all transactions are conducted electronically.
2. ICTs can reduce transaction costs and increase operational efficiency. The use of branchless banking, electronic payment systems, and other ICT-enabled services not only reduce the transaction costs incurred by financial institutions in catering to remote areas, they also obviate the need for farmers to visit a bank branch to conduct transactions. The use of ICTs by financial institutions or government agencies can also improve operational efficiency because ICTs make it possible for organizations to conduct information gathering, monitoring, and evaluation on a real-time basis.
3. The use of ICTs can improve risk management and authentication. Through ICT-equipped credit bureaus and collateral registries, financial institutions can better manage their risks when lending to agricultural clients. Biometric tools can deter identity theft and provide a more accurate identification system. Radio frequency identification (RFID) can be used to track livestock, harvests, and input.
4. The main function of ICT is to disseminate relevant information to both farmers and financial institutions.

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