

## BESSH-16

THE ROLE OF MICROFINANCE IN ADVANCING SMALLHOLDER  
AGRICULTURE

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**Keywords:**

Microfinance

Agriculture

Developing Countries

Public Policy

**Abstract.** The agricultural sector is the heart of many developing and low-income economies. The economic centrality of smallholders makes them extremely important for catalyzing broad-based economic growth. They are sometimes considered to be grass root of the economy. One key tool in improving smallholder productivity may be in the rapidly growing area of microfinance, which refers to the provision of financial services to poor and low income people. The advocates of microfinance suggest that it will highlight more opportunities for farmers or the poor to improve their productivity and, hence, quality of life. Smallholder agriculture has not been paid much attention from microfinance institutions (MFIs) in the past but during the last few years the role of MFIs in advancing smallholders agriculture has become increasingly significant. Nevertheless, there are some issues that encounter the improvement of smallholder agriculture through microfinance. This paper aims to emphasize the challenges and issues of microfinance faced by smallholder agriculture and the grass root farmers, address the financial needs of smallholders, discuss methods by which MFIs and public policy to support MFIs can help improve agricultural production, point out challenges unique to rural financing, and illustrate a framework for mitigating these challenges.

**INTRODUCTION**

It is commonly known for a period of time that many of the poor live in rural areas. Moreover, many of this population are either engaged in small-scale agricultural production or dependent upon it for their living, particularly in developing economies (International Fund for Agricultural Development (IFAD), 2010). The economic centrality of smallholders makes them extremely important for catalyzing broad-based economic growth. They are sometimes considered to be grass root of the economy. Improving the productivity of these grass root small farmers can be a potent method for improving the lives of the vast majority of the poor.

It is worth considering the some figures in order see the picture of this story more clearly. The International Fund for Agricultural Development (IFAD) estimates that world food production must increase 70% by the year 2050 in order to feed an expected population of 9 billion people (International Fund for Agricultural Development (IFAD), 2010). Developed nations alone may not be able to meet this target. Thus advances in the productivity of smallholder agriculture serves the twin goals of increasing global

and domestic food security, and directing new sources of income to the very poorest sections of society.

One key tool in improving smallholder productivity could be the speedily rising capacity of microfinance, which refers to the provision of financial services to poor and low income people. Many microfinance institutions (MFIs) have some tendency to avoid very rural and agricultural borrowers because of certain reasons such as low population density, high-risk, and inaccessibility. Nevertheless, some NGOs and consulting groups have recently been developing policy guidelines to make this sort of lending more feasible. Great levels of competition in urban areas could further incentivize microfinance institutions (MFIs) to look beyond urban borders and expand to the relatively uncompetitive rural market (Center for Financial Inclusion, 2004).

This paper aims to give a brief overview of microfinance, touch on challenges faced by small-holder agriculture and the grass root farmers, address the financial needs of smallholders, discusses

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methods by which MFIs can help improve agricultural production point out challenges unique to rural financing, and illustrate a framework for mitigating these challenges.

This paper, therefore, contributes some critical discussions that will both theoretically and practically benefit policy makers as well as smallholder agriculture. The conclusion from this study can be brought into consideration of policy makers or future researchers in this field of study. Smallholder agriculture and grass root farmers are expected to improve agricultural productivity and find ways to cope with challenges facing them in order improve their quality of life in the future.

### **What is microfinance?**

Before proceeding to the discussion of the ways to improve smallholder agriculture through microfinance, it is essential to clarify and define its concept. Microfinance precisely involves the provision of basic financial services (such as loans, saving, and insurance) to low-income individuals, for whom it is not possible (or feasible) to use commercial financial services. Large, commercial banks, when they exist in the developing world at all, are likely to be located only in the largest cities, utilized by wealthier members of a society. Distant locations, inaccessible operating hours, minimum balances, complicated transaction rules, and the barriers of illiteracy discourage poorer depositors.

In the absence or lack of more formalized financial services, people in traditional communities have invested surplus funds in domestic animals, food stores, or raw materials. Yet these options tend to be somewhat insecure and uncertain from time to time. Animals become sick, land erodes, raw materials decay, theft occurs. Options offering a slightly higher degree of security, such as rudimentary savings and credit groups (revolving credit groups, savings clubs, burial societies) are traditional in many societies, from India to Mexico to West Africa.

Despite the fact that the concept of microfinance itself is not new (Mercy Corps, 2006), it has only recently enjoyed world-wide notoriety through the 2006 Nobel Prize win of economist Mohamed Yunus, founder of Grameen Bank in Bangladesh. MFIs like Grameen operate under the theory “that participants, if given the opportunity to borrow in small amounts, will be able to break the cycle of debt by using the borrowed funds to invest in small businesses and build wealth (Cooney, K., 2010).” Such safe, secure financial products for the poor have proven to be a powerful tool in the reduction of poverty. In absence of traditional collateral, MFIs rely on “character” and group dynamics to ensure repayment of loans. They also tend to charge high interest rates in order to recover large transaction costs (providing many small loans is more expensive than providing fewer larger ones). Microfinance and MFIs continue to enjoy rapid growth: in 2009 there were 1,931 MFIs serving 92.4 million borrowers, with an

average loan balance of \$521, and a total loan balance of \$65 billion (MIX Market, 2011).

### **Rural and Agricultural Finance**

Nowadays, a wide spectrum of institutions in several developing countries fall under the large umbrella of MFIs, including credit unions, co-operatives, village intermediary organizations, private enterprises, and microfinance “branches” of traditional banks, and they range in size from ten to ten thousand clients. In the absence of other sources of finance these varied MFIs fill a crucial gap in financial markets in many developing countries (Lapenu – Cerise, C., 2002). The degree of government support as well as the rate of interest and the eligibility of clients also vary among these countries.

For agricultural sector, it has strong demand for financial support as many farmers tend to lack funds. Therefore, agricultural microfinance has a significant role in facilitating the improvement of agricultural sector. Agricultural microfinance refers to the subset which provides financing to smallholder farmers involved in small scale animal husbandry and agricultural production. This kind of microfinance might finance the production, distribution, input supply, processing and marketing of agricultural products (Andrews, Meagan, 2006).

### **Who are smallholders?**

Smallholders are generally synonymous with “subsistence” farmers, or those growing diverse crops for their own survival (or that of their family), rather than specialized cash-crops oriented toward the market for sale. Smallholders in regions such as Africa or South Asia dominate agricultural landscape, and are characterized by being resource-poor, having land holdings of less than one to two hectares, low access to markets, being highly dependent upon family labor, and vulnerable to risk (Made, Joseph, 2008).

Numerous pressures constrain the advancement of smallholders, including urbanization and urban migration (fewer people growing food; labor shortage), population growth (more people to feed), declining land productivity (decreased quality and quantity of output per hectare), and the diversion of agricultural outputs to nontraditional uses (ethanol) (Livingston, G., Schonberger, S., & Delaney, S., 2011).

Agriculture does continue to grow in many developing and low-income countries, though much of this growth has been the result of extensification rather than intensification. Therefore it is dependent upon the expansion of the area of land under production (often by deforestation, or expansion onto poorer soils) rather than by employing techniques to make existing land more productive (Livingston, G., Schonberger, S., & Delaney, S., 2011). Though expanding land under cultivation must be one

component in agricultural growth, environmental sustainability and the impact on the existing uses being diverted such as grazing land (Livingston, G., Schonberger, S., & Delaney, S., 2011) must be taken into account. Sustainable growth must primarily involve the intensification of production.

### **How MFIs can help smallholders?**

The financial needs of smallholder farmers can be characterized as routine (short term) or occasional (long term). Short term needs include the regular costs of agricultural inputs like seeds, pesticides, fertilizers, hired labor, and sharecropped or rented land during the farming season. They also include animal husbandry costs, such as short-term livestock fattening to increase price at resale, or regular veterinary care (Lapenu – Cerise, C, 2002).

Another important routine cost may arise from the rental of storage space for crops post-harvest. Storage can allow farmers in a given area to stagger the sale of their output, avoiding a surplus of supply, and instead wait for a higher sale price months later. Value-adding processing, (activities such as shelling, husking, drying, milling) may also require temporary crop storage, or even rental of specialized equipment. Though these short term effective inputs are likely to bring returns exceeding their investment costs, the reserve funds needed to purchase them are often non-existent, placing them out of reach of the poorest farmers.

Farmers can also profit from financing for medium to long-term “capital” investment needs. Increases in production may require purchase of the right or essential equipment, such as tractors, motorized pumps, and other small machines, or animal “equipment” such as oxen or horses for draught cultivation. Transportation equipment for post-harvest delivery to distant markets, and long term storage facilities also require financing. Insufficient access to (productive) land can also be a major constraint for the development of small-holders.

Perennial or “plantation” crops such as coffee, cocoa, rubber, palm or fruit trees represent other long term needs for those farmers at slightly higher levels of production, and usually entail major initial investments costs. Though these crops may be lucrative in the long term, several years are usually necessary for farmers to witness any returns from them whatsoever. Without financing, such long term investments may prove impossible to make.

In addition, farmers with uneven agricultural income streams (where funds are collected seasonally) would benefit from savings mechanisms. Absent other methods for saving, food stores or livestock serve as a way to preserve funds for leaner seasons and protect against risk and unforeseen circumstances. More dignified savings accounts would clearly provide much greater security and predictability for smallholder farmers’ income stream.

It is obvious that microfinance can truly serve smallholder agriculture as an opportunity provider both for short-term and long term financial needs. This will finally benefit both farmers as well as their community and the country’s economy.

### **The determinants of high-level production**

In order to intensify smallholder production, the financial needs discussed must be met with increased access to credit and savings. The following are several areas in which smallholder agriculture in several developing countries lags behind other developing regions, and where appropriate financing could have a dramatic impact on production (The World Bank, 2006):

-Fertilizers: Farmers in especially in Sub-Saharan Africa trail the rest of the world, including other developing areas, in the use of fertilizer. They apply less than 10kg of nutrients per hectare, while the average application in Latin America and South Asia is nearly 140kg per hectare (The World Bank, 2010). Fertilizer use thus represents an enormous potential area for production expansion.

-Seeds: Smallholder’s access to high-yield, seed varieties is low. The use of high quality seed in SSA accounts for between 2-33% of seed, with seed stock renewal occurring only every 9-13 years (Ndejeunga, J and Bantilan, M, 2002).

-Irrigation: In this regard, many of developing countries still find it difficult to achieve sufficient irrigation. This is particularly obvious for Africa. 36% of arable land in Asia and 11% of land in Latin America is irrigated, compared with less than 3% in Sub-Saharan Africa (International Fund for Agricultural Development (IFAD), 2010). Two countries alone possess nearly a third of the irrigation productivity potential for all of Africa: the Democratic Republic of the Congo and Angola (Food and Agriculture Organization of the United Nations (FAO), 2010).

-Post harvest Loss reduction: Farmers in developing countries often needlessly lose a portion of their crop to grain shattering and spillage, as well as spoilage during each step of the chain, including storage. Losses of cereals in the East and Southern Africa region have been between 14% and 17% each year from 2003-2009 (PHL Network, 2010). Smallholder investments in better transport and storage facilities could help eliminate this wastage and increase their productivity.

### **Future Challenges**

Despite the enormous unmet need for agricultural lending, and numerous areas of potential benefit, MFIs have traditionally dedicated only minimal proportions of their portfolios to agricultural borrowers (Certified Government Auditing Professional (CGAP), 2006). More so than other forms of microfinance, agricultural lending faces significant obstacles to both its implementation and its financial sustainability. Wide geographic dispersion of clients, low population density and

inaccessibility all combine to deprive rural borrowers of financial services.

Additionally, the inherently risky nature of agricultural activities makes the likelihood of return on loans significantly less than on other forms of micro-lending. Agricultural production and output are sensitive to numerous external and largely uncontrollable factors that could dramatically inhibit farmers’ ability to repay loans. Poor or catastrophic weather, low crop yields, crop spoilage, insect damage or global recession can all drastically curb revenues and create high rates of default on agricultural loans (The World Bank, 2006).

Table 1 illustrates the challenges in agricultural lending as identified by international organization and scholars. It is obvious that there are certain challenges facing agricultural lending in general. This clearly ranges from the aspect of high transaction cost as well as the liquidity problem due to seasons to the administration of load provision to match the need of local farmers and to a greater extent of economic crisis. Moreover, in a more specific context, small farmers in developing farmers may face a more sophisticated challenge in lending. Besides, issues such as global warming could add difficulty to the provision of agricultural lending in many developing countries.

**TABLE 1  
CHALLENGES IN AGRICULTURAL LENDING**

<b>Challenges in agricultural lending:</b>	
•	Reaching rural clients efficiently and cost effectively
•	Maintaining liquidity in agriculture-dependent areas amid seasonal
•	Cyclical income streams, economic crisis and regulatory constraints
•	Adapting loan products to meet the specialized needs of rural borrowers
•	Overcoming poor repayment culture
•	Developing technical capacity at the local level (CGAP, IFAD, 2006)

**OVERCOMING CHALLENGES TO AGRICULTURAL LENDING AND THE ROLE OF PUBLIC POLICY**

In order to better facilitate MFI expansion into rural markets, organizations such as ACCION and CGAP have developed a framework for managing the risks inherent in agricultural lending. The most salient features of this framework that can overcome challenges to agricultural lending should be as follow:

First of all, repayments should be clearly linked to loan use. Stress should be placed on clearly conveying the importance of repayment obligations, regardless of the outcome of the loan or income earned from its utilization. This requires a process of knowledge creation to small farmers and the local community.

Secondly, a careful consideration should be paid to the selection of borrowers. MFIs with technical and market knowledge can better select those borrowers who are likely to be successful in their agricultural projects. This is similar to the classical problem of asymmetric information. Therefore, governments should ensure that enough information about the borrowers can be obtained by the lenders. If needed, a new authority should be set up to serve this function.

Thirdly, savings should be encouraged. Providing methods and accounts for savings and deposits will allow farm families to reserve funds during harvest times in order to equalize income streams throughout the year. Thus, governments should also

allocate resource to ensure that farmers are aware of the importance of savings and saving facilities should also be provided.

Fourthly, lending to a variety of clients and households, each engaged in different income-generating activities (various crops; livestock) tends to reduce default from natural or unforeseen disasters (drought, floods, epidemics). Portfolio diversity is, therefore, another tool that can overcome the challenges of agricultural lending.

Fifthly, cyclical repayment schedules should be provided. Loan repayment terms which are tailored to allow cyclical cash flows allow greater flexibility of repayment options. This will increase the chance of making loan repayment as well as reducing the risk. Technical assistance should also be added to the package or policy that aims to overcome challenges of agricultural lending. By incorporating technical assistance and provision of inputs into loan contracts, rural MFIs can help to reduce borrower risk, enhance the quality of the final product and ensure repayment.

Last but not least, existing infrastructure and technology are also the crucial factor. High transaction costs associated with inaccessible, rural lending can be reduced by “piggy backing” on existing institutions (Post offices, government outposts). Technologies like PDAs also have enormous potential to extend the range and mobility of lenders into rural areas.

Apart from the above programs, public policy and support should also be taken into account. Public policy can play and should play a determinant role in the solving of insufficient lending of financial support for smallholder farmers. Integrated agricultural development policies and microfinance as well as institutional frameworks should be adopted. Certain rules should be enacted as well as incentives should be by governments to facilitate MFIs to work closely with smallholder farmers.

## CONCLUSION

Land degradation, climate change, market liberalization, and population growth are accumulating burdens on the rural agricultural sector to strengthen and modernize. Sustainable increases in production will be dependent on the smart application of capacity-expanding technologies like fertilizers, seeds, irrigation schemes and mechanization. Yet, while many of these technologies require significant financial investments, smallholders are rarely in a position to meet the costs through

self- financing alone. This is particularly striking for the case of small farmers.

Agricultural microfinance programs put money directly in the hands of the poorest earners, utilizing existing social structures, networks and knowledge bases to do so. They allow and help facilitate farmers to take advantage of economies of scale, new technologies, value-adding processing techniques and save for the future. This role of facilitation has been proved clearly.

Inaccessibility, high transaction costs and agricultural risk all pose challenges to the sustainable implementation and expansion of agricultural lending. Therefore, new technologically smart and integrated methods, designed with the specific challenges of seasonal agriculture in mind, will be needed to overcome these obstacles and meet the needs of smallholders. Governments in developing countries need to allocate resources in order deal with these challenges. Public policies to facilitate loans, repayment mechanisms, knowledge on savings as well as technical assistance should be promoted and implemented.

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