Income Intervention Quick Scan: Access to Finance

Farmer Income Lab Intervention Quick Scan

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Abstract UK This quick scan, commissioned by the Farmer Income Lab, is part of a wider research effort looking at, “What are the most effective actions that lead buyers can take to enable smallholder farmers in global supply chains to meaningfully increase their incomes?”. The quick scan provides an overview of the publicly available evidence on the impact of agricultural finance have had on raising farmer income. Such subsidies have had little positive effect on farmer income, are not notably beneficial for women nor is this effect long-term. They have been applied at large scale. This quick scan is part of a series of 16, contributing to a synthesis report “What Works to Raise Farmer’s Income: a Landscape Review”.

Keywords: farmers’ income, intervention, agriculture, smallholders, finance, credit, savings

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Photo cover: Photo source: CIAT, Georgina Smith

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List of abbreviations and acronyms

1AF	One Acre Fund
AgFinance	Opportunity's International Agricultural Finance program
AGRA	Alliance for a Green Revolution in Africa
DFID	Department for International Development (UK)
IFC	International Finance Corporation
MFI	Microfinance Institution
NGO	Non-governmental Organization
OI	Opportunity International's
OIBM	Opportunity International's bank in Malawi
SHARE	Society for Helping to Awaken Rural Poor through Education
SME	Small and Medium-Sized Enterprise
USAID	United States Agency for International Development
WCDI	Wageningen Centre for Development Innovation, Wageningen University & Research
WUR	Wageningen University & Research

1 Introduction

1.1 Definition

Agricultural finance refers to financial services ranging from short-, medium- and long-term loans, savings to leasing, to crop and livestock insurance, covering the entire agricultural value chain - input supply, production and distribution, wholesaling, processing and marketing.

The current paper deals with access to credit and savings at smallholder level.

1.2 The credit gap

A renewed drive at the beginning of the 21st century to connect farmers to financial services has launched a new "era of farmer finance." Stakeholders from the separate silos of agricultural development, financial inclusion, and information and communication technologies for development have found common ground in bringing the tools of financial empowerment to smallholder farmers. Even with these developments, however, the gap between the financial needs of smallholders and the supply of financial services is anticipated to remain significant. Credit provided by informal and formal financial institutions, as well as value chain actors, currently only meets an estimated USD 50 billion of the more than USD 450 billion need for smallholder finance in the regions of sub-Saharan Africa, Latin America, and South and Southeast Asia. While impact-driven lenders, local lenders, and local government services engaged in this space have disbursed over USD 350 million, they currently meet 2% of global demand.

In addition, agricultural insurance reaches just 10% of smallholders and fewer than 15% have access to a formal savings account. Projected growth of 7% per year from formal institutions and value chain actors will not make a meaningful dent over the next five years.

1.3 Theory of change

According to the theory of change, access to finance allows farmers to cover production-enhancing technologies and other agriculture life-cycle related costs at the right time. This leads to increased production, which should lead to greater sales and therefore more income.
Farmer can also can invest in income generating pursuits beyond primary production to add value to their primary production. It also allows asset building so they can save more which in turn allows them to participate in healthy borrowing. Greater assets allows them to pay less for services (including time savings) and can smooth consumption and improve resilience to shocks. Greater resilience, value addition, lower costs can increase income and ultimately improve their quality of life. Non-income benefits include becoming empowered through greater privacy, monitoring and control of their resources
There are financial access programs initiated all over the global South.

1.4 Role of actors

Successful interventions involved a variety of actors from public and private sectors. There are certain tasks to be implemented when providing access to smallholders, which can be picked up by different actors depending on the context in the different countries.

Typical roles needed include assessing finance needs; organizational structures that can manage finance disbursement, monitoring and recouping of loans; training farmers to identify and manage responsible loans; outreach to make the availability of funds known.
Finance programs have been implemented where all roles are played by different actors.

2 Summary and justification of assessment

Strength of outcome		
Assessment criterion	**WUR score**	**Rationale for score**
Scale: Size of the population intervention could impact and potential to scale to other contexts	High	• Since 2010, 15 MFIs in the Philippines, Cambodia and Vietnam have developed and pilot tested agri microfinance products designed to finance farm production. To date, more than 15,000 small-scale farmers have been financed • Opportunity's International Agricultural Finance (AgFinance) program, financed by DFID, helps smallholders farmers increase farm productivity, financial stability and food security to enhance life (2016). o Ghana/ 10 000 farmers with USD 1.8 million loan, 36% women o Mozambique / 2100 farmers with USD 103 000 loan and 28% women. o SHARE (Society for Helping to Awaken Rural Poor through Education) is one of the fastest-growing MFIs globally, serving about 400,000 clients
Impact: degree of increase in incomes	Medium	• 1AF's clients saw an increase of USD 137 in annual profits on average, boosting their income by 55% and increasing total household income by 15% on average • 76% of SHARE's mature clients (who remained with SHARE for more than two years) experienced significant reductions in poverty, and one-third are no longer in the category of the poor
Sustainability: financial ability of farmer income increase to endure independent of ongoing external support	N/A	o No data found
Gender: Potential of intervention to positively impact women	High	• OIBM Malawi o More than 81% of women clients reported improvements in decision-making power o 58% reported increase income o 55% reported improvements in livelihoods
Strength of evidence		
Assessment criterion	**WUR score**	**Rationale for score**
Breadth: amount of rigorous literature that exists on the impact of the intervention, as defined by the minimum quality of evidence for this paper	Low	• The biggest challenge is that most of the data are confidential when it comes to access to finance if private sector is involved. However, private sector involvement is key to success. Therefore available data and studies are limited in terms of relevant indicators • Different studies and interventions use different indicators; benchmarking cannot be done in review time
Consistency: Degree to which the studies reviewed are in agreement on the direction of impact	Low	• Different studies and interventions use different indicators; benchmarking cannot be done in review time

3 Methodology

The team has done extensive desk research with focusing on impact of agri finance on productivity, livelihood of smallholders and specifically on female farmers. During the search, about 40 documents / 10 websites / blogs got were identified for in-depth review. In the end, 12 of them proved to be relevant (see Reference section).

1. Meta studies
    a. The Learning Lab conducted an annual review looking at emerging learnings from the MasterCard Foundation's $175M RAF portfolio of partners and sub-partners (Financial Service Providers) in relation to smallholder finance in developing countries around the world (reference 1).
    b. USAID's Development Credit Authority database, Root Capital lender surveys, existing published case studies, including those from the IFC's 2012 report, Innovative Agricultural SME Finance Models, websites of all 1,800 banks in Latin America, Sub-Saharan Africa, and South and Southeast Asia looking for indications of smallholder lending products. (Reference 2).
    c. Since 2010, 15 MFIs in the Philippines, Cambodia and Vietnam have developed and pilot tested agri microfinance products designed to finance farm production. To date, more than 15,000 small-scale farmers have been financed, total credit provided is nearly $10 million, and portfolio performance has been at least as good as the MFIs' enterprise loans (reference 3).

1. Specific review
    a. Gender: Report of Opportunity's International Agricultural Finance (AgFinance) program, financed by DFID, helps smallholders farmers increase farm productivity, financial stability and food security to enhance life (2016).
    Ghana/ 10 000 farmers with USD 1.8 million loan, 36% women
    Mozambique / 2100 farmers with USD 103 000 loan and 28% women (reference 4).

4 Impact

4.1 Yields and income

Most parties intend to measure their impact by assessing farmer yields and income, but are using different metrics e.g., total income vs. agricultural income. Direct comparison is not possible, the following is given as indication of the range of impacts noted.

- 1AF found positive impact of their programs on farmers' profits and household incomes:
- 1AF's clients saw an increase of USD 137 in annual profits on average, boosting their income by 55%.
- Increase of 15% in total household income on average.
- This is similar across different countries and crops; evidence does suggest higher impact for tenured farmers.
- One Acre Fund reports typical crop yield increases between 50% and 100% for farmers who take out loans and receive related trainings.

4.2 Gender

The literature on the gendered impact of financial services often overemphasizes credit at the expense of other aspects of financial services for poor women. More recent literature recognizes the benefit of bundling of credit and savings services, and that the spectrum of financial services should include opportunities to save—and to protect those savings. Opportunities to save may take on different forms, and finding the appropriate vehicle could be important innovations in financial services markets. One example is the use of commitment savings products. Such commitment savings products are similar to the "forced savings" of group members in NGO programs, in which group members are required to contribute a small amount at every meeting, which is then kept in a group fund, and which is inaccessible to the group member or any family member. These commitment devices for savings could benefit those who have the self-control to save small amounts periodically, as well as those with familial or spousal control issues.

Opportunity International's bank in Malawi, OIBM, was founded as a traditional credit-led microfinance bank, but it now also offers two savings strategies: a biometric smart card that enables illiterate customers with no official government identification (the vast majority of the population) to open and manage a savings account using fingerprints for identification; and inexpensive community branches made from used shipping containers. The product caused an increase in household decision making power for married women, measured both in the women's own reporting of how household decisions were made and in the household's purchases of goods typically used by women. The effect on decision making power was strongest for married women who had below-median household decision making power prior to the intervention. They also found that households in which a woman was offered the commitment product were more likely to buy durables typically used by women within the household, and found no such effects on household durables when a man was offered the commitment savings account.

In terms of gender impact due to bundling of services:

- 81% of women clients self-reported improvements in decision-making power due to engagement with OI.
- 58% of women self-reported increase in income.
- 55% of women self-reported improvements in livelihoods.

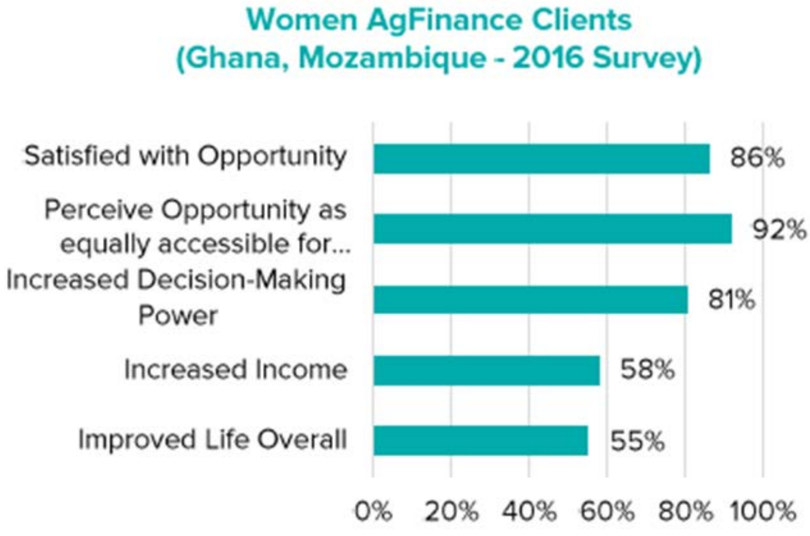

Figure 1 *Gender impact due to bundling services.*

4.3 Nutrition

1AF did not find significant effects of their programs on nutrition or education outcomes; these outcomes likely take longer to accrue.

5 Key success factors

Addressing the business reality of small farmers
Most small farmers in developing countries have little education and limited exposure to modern financial instruments. Further, many of these small farmers have only recently transitioned from subsistence to commercial farming, and their contact with the cash economy and experience in cash management is limited. Additionally, many small farmers in developing countries live in remote rural settings, where urban-based retail banking is unavailable.

Bundling financial and nonfinancial services
In addition to financial constraints, small farmers in developing countries also face market constraints in acquiring needed inputs (such as fertilizer, seeds, and extension services). Returns to financial services are thus highly conditional on access to other nonfinancial services. Examples of demonstrated impacts due to bundling are:

- 1AF, AGRA and OI found that bundled services increase uptake and impact:
- AGRA and 1AF found that bundled savings and insurance de-risks farmers and increases investments in productive uses
- OI found that providing credit, training, inputs and access to markets led to an expansion in production and yields for cocoa farmers in Ghana
- 1AF found that non-financial services (e.g., ag training, financial education) increase farmer uptake of loans by helping farmers invest their loans more productively
- 1AF found that the combined effect services is larger than each on their own. Farmers that took training and fertilizer increased average bean yields by 100kg more than either intervention alone

Policies and procedures must be based on thorough risk mapping inherent in the product and its delivery for effective loan administration.
This can lead to helping manage risk at the household and farm level. Index-based insurance schemes are one approach that has been implemented on a pilot basis and even up scaled in several countries (see Intervention quick scan on insurance schemes). For example, if climate change makes an area increasingly vulnerable to natural disasters, or if a commodity is vulnerable to changes in rainfall, the lender has the option of transferring the risk (with insurance, if available) or avoiding it (by looking for other areas or other commodities to finance).

Product feature development based on the cash flow profiles of commodities being grown combined with total household cash flow.
Basing the loan assessment on the commodity being grown separates the financing needs of the farm from the broader financing needs of the entire household. Specifically, it focuses the loan on agri production only; financing needs for anything that is not production-related, like purchases of tools and equipment, processing, transportation and marketing are outside the scope of the agri-microfinance loan (these financing needs are to be met with an enterprise loan).

Segmentation based on the agricultural commodity
This implies limiting lending to only those commodities that can be grown profitably. For each of those commercially viable commodities, a “commodity profile” is created through information gathered during the market study. The profile maps the cash flow throughout that commodity’s production cycle, which is then used to design the main loan features (size, tenor, repayment schedule) to match the needs of the farmer-client. Although the financing need is calculated based on the commodity being grown, total household cash flow is considered in determining the repayment schedule.

Anchoring of agri-microfinance on social performance management
This is often crucial for the success of agri-microfinance products. One specific example of this is the integration of the client protection principles into the MFI's policies and procedures. For example, appropriate product design and avoiding over indebtedness through thorough loan assessment and providing financial education.

Using modern communication technology
This overcomes distance and information bottlenecks, managing risks at the farm and household level, and bundling financial services with nonfinancial services to address the multiple constraints faced by most small farmers.

6 Barriers addressed

The key success factors embedded in many access to finance interventions are designed to address the follow list of typical barriers relevant to making finance accessible to small-scale producers.

- Seasonality of many agricultural activities and long maturation periods for others, resulting in variable demand for savings and credit, uneven cash flow and lags between loan disbursal and repayments.
- Risks linked specifically to farming, such as variable rainfall, pests and diseases, price fluctuations, and small farmers' poor access to inputs, advice, and markets.
- Dispersed demand for financial services due to low levels of economic activity and population density.
- High information and transaction costs linked to poor infrastructure and lack of client information.
- Weak institutional capacity of rural finance providers related to the limited availability of educated and well-trained people in smaller rural communities.
- Crowding-out effect of subsidised and/or directed credit from state-owned banks or donor projects.
- Lack of usable collateral due to ill-defined property and land-use rights, costly or lengthy registration procedures, and poorly functioning judicial systems.
- Low financial literacy and financial management skills among farmers and farmer organisations. In the reviewed case studies farmer organizations were addressed in form of supporting their development and enhancing managerial and technical skills of smallholders. This was key when intervention offered bundled services.
- On supply side, there is a high barrier to entry for banks interested in serving smallholders. While banks surveyed in the study (reference 2) report that they can offer smallholder products profitably, doing so requires large upfront investments in staff skills, technology, and back-office processes that cannot be recouped without reaching scale.
- The few banks that managed to overcome barriers have done so through a mix of product, distribution, and collateral customization that serves smallholders effectively. For example: to improve farmers' ability to pay on time, some banks have collaborated with local agriculture experts to design loans with flexible repayment terms that are linked to actual crop cycles.
- Regarding distribution, mobile technology has enabled roaming agents to distribute finance to rural customers where they live and work, collecting information while reducing transaction costs.
- Farmer organizations can serve as a central point for loan distribution and collection.
- The use of group lending, warehouse receipts, or equipment leasing allows banks to offer financing to farmers without traditional hard assets as collateral.

Gender specific barriers

Collateral requirements, high transaction costs, limited education and mobility, social and cultural barriers, and the nature of women's businesses (often concentrated in low-return sectors) limit women's ability to obtain credit. Women's roles as primary caregivers and health risks associated with childbearing also lead to intermittency in employment, which makes them risky clients for banks. Social customs in some cultures also prohibit women from receiving information from outside lenders—an important consideration if husbands do not fully convey the information to their wives. Under these conditions of imperfect information and barriers to access, credit and insurance delivery systems need to be designed to overcome women's constraints.

7 Questions for further research

Despite these positive findings, there remain significant knowledge gaps when it comes to farm level impact of financial services. For instance, most of the evidence today looks at the impact of the digitization of payments and to some extent short term and working capital credit.
More broadly, there is little to no evidence on:

- **Impact on farmer livelihoods of other financial products**: Providers need to invest in understanding how to ensure farmer investments lead to financial returns, monitor them over time, and capture some of those returns to increase the sustainability of their business models. For example, this research could help service providers understand how much productivity and farmer income is expected to increase from asset-based loans or insurance.
- **Optimal service features for farm level impact**: To date, there is little to no evidence on what service features or attributes are most effective at driving uptake, yields, and income and/or mitigating farmer and therefore business risk. This is particularly true for bundled services and digital attributes, despite the sector hype. Within the RAF Learning Lab's portfolio, some players are beginning to scratch the surface. Organizations such as Opportunity International and One Acre Fund saw an increase in adoption when transitioning to digital. However, this evidence is still primarily focused on adoption and at most yields -– with little guidance on what this means for smallholder livelihoods.
- **Gender-focused outcomes of financial services**: Providers need to understand how female farmer returns from financial services may be different from that achieved by male farmer, and what service features work best to achieve gender-focused impact outcomes including financial independence and household decision making power.
- **Relationship between farmer returns and business profitability**: While we are seeing increasing focus on farm level impact, there is still little evidence on the extent to which enabling higher farmer returns leads to more profitable business models for financial service providers.
- **Assess private sector lending schemes**: data are generally confidential, innovative approaches are need to gain access to those private data.

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The mission of Wageningen University and Research is “To explore the potential of nature to improve the quality of life”. Under the banner Wageningen University & Research, Wageningen University and the specialised research institutes of the Wageningen Research Foundation have joined forces in contributing to finding solutions to important questions in the domain of healthy food and living environment. With its roughly 30 branches, 5,000 employees and 10,000 students, Wageningen University & Research is one of the leading organisations in its domain. The unique Wageningen approach lies in its integrated approach to issues and the collaboration between different disciplines.

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The Centre for Development Innovation works on processes of innovation and change in the areas of food and nutrition security, adaptive agriculture, sustainable markets, ecosystem governance, and conflict, disaster and reconstruction. It is an interdisciplinary and internationally focused unit of Wageningen UR within the Social Sciences Group. Our work fosters collaboration between citizens, governments, businesses, NGOs, and the scientific community. Our worldwide network of partners and clients links with us to help facilitate innovation, create capacities for change and broker knowledge.

The mission of Wageningen UR (University & Research centre) is 'To explore the potential of nature to improve the quality of life'. Within Wageningen UR, nine specialised research institutes of the DLO Foundation have joined forces with Wageningen University to help answer the most important questions in the domain of healthy food and living environment. With approximately 30 locations, 6,000 members of staff and 9,000 students, Wageningen UR is one of the leading organisations in its domain worldwide. The integral approach to problems and the cooperation between the various disciplines are at the heart of the unique Wageningen Approach.