AGRICULTURAL FINANCE: CREDIT UNIONS FOCUSING ON THE SOCIOECONOMIC EMPOWERMENT OF FARMERS

By

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Abstract

Enhancing access to agricultural finance has been a challenge and despite a well-developed credit delivery structure of banks and financial institutions, the pace of agricultural financing is slow, regional imbalance is widening and share of small farmers in banks and financial sector is declining. Lack of access to finance is one of the reasons why agricultural productivity in developing countries. Enhancing access to agricultural finance is as pressing strategy as ever. But access has not been expanding pursuant to demand due to constraints such as high delivery cost and proximity; weak farming practices and farmers, lack of banking technology, collateral, exogenous risks, government intervention, and weak collaboration with farmers. Past government policies have not been able to remedy these constraints. Nonetheless, recent innovations in agricultural finance such as value chain finance approaches involving traders, processors, warehouse receipt finance, agricultural (index) insurance, and (rural) microfinance, among others, have created renewed interest in this front.

Numerous studies have shown that access to finance from credit union can have a positive impact on the cash position of rural households, enhance the smoothening of their consumption and to a certain degree strengthen their resistance to economic shocks. However, their ability to stimulate household accumulation process and to contribute to productive investment especially in agriculture is always questionable.

Credit unions are the effective instrument by which very poor can access hassle free formal credit without any collateral security and simultaneously improve their thrift habits. They have operated in isolated pockets and provided financial services to their shareholder farmers at the doorsteps. Credit unions have potential to address four out of seven constraints of agricultural financing namely: high delivery cost and proximity; lack of banking technology, collateral, and weak collaboration with farmers. On the agricultural value chain finance front, credit unions are very much suitable to enhance access to finance to producers, producers associations and input suppliers and there are instance where credit union has catered their services to this layers of the value chain. This modality successfully builds upon the self-help potential of the target group. Due to enhance education of the people and their opportunity to build common fund for investment, they are induced to a considerable improvement in their economic situation.

Further, in addition to providing financial services, credit union should be engaged on ensuring access to non financial services on diverse sectors such as watershed development, livelihood promotions, organic farming, agriculture extension services, environmental impact assessments, training and capacity building, education, skills development and financial literacy among farmers. Such a role of the credit union will be instrumental on the empowerment of farmers.

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1. INTRODUCTION

1.1. History of Agricultural Finance

Agricultural finance has been the topic of academic and policy discussion over the last few decades. Agricultural sector has been the focus of government intervention to address the multiple and sometimes contradictory challenges of ensuring national food security. Earlier efforts to ensure access to agricultural finance focused on administratively setting interest rates and compulsory lending quotas to banks and financial institutions and establishment of Agricultural Development Banks in many countries. International development partners namely World Bank, ADB, KfW, and IFAD, provided credit lines to Agricultural Development Banks through central bank or ministry of finance in many countries at concessionary interest rates. Parallelly, governments strongly intervened in agricultural value chains through (state-) monopolized marketing and price controls system in the form of promotion of farmer cooperatives, input suppliers, agro-processors, and state-controlled marketing Boards. Farmers were often compelled to sell their production through the indicated channels, and had practically no influence on the prices and terms imposed on them. Export crops were often excessively and arbitrarily taxed.

During 1980s, the symptom of failures of the state-led model of agricultural finance was increasingly visible in the form of failing to reach poor farmers, and high loan losses. The Agricultural Development Banks' business model of financing only one sector i.e. agriculture, and often only a few crops contradicted the principles of risk management in banking. The banks and financial institutions disbursed loans based on assumed needs rather than demand, and provided inadequate focus on portfolio quality, non-farm rural incomes, and other financial services, such as payments, savings and insurance. Farmers were forcefully organized into cooperatives, and borrowed for the wrong reason without business plan. Governments often imposed agricultural debt forgiveness further confusing farmers on the differences between loans and grants. Meanwhile, the provision of subsidised loans through government channels, along with poor loan recovery and recurrent debt waivers, gave banks and financial institutions every reason not to serve agriculture.

Since early 1980s, many countries started financial liberalization initiatives in response to the failure of state-directed lending programmes, interest-rate caps, recurrent debt forgiveness, and public intervention in almost all aspects of agricultural finance. The outcome of this initiative has been significant increase in volume and quality of financial services. The liberalisation of financial markets open up avenue for new actors such as microfinance institutions (MFIs) to emerge in different parts of the world. There has been paradigm shift to the sustainable and cost-efficient provision of financial services to the poor. The liberalisation of financial markets also created space for a large variety of member owned and managed credit unions that targeted to rural populations.

Although MFIs mostly emerged from the urban areas, but over the years they gradually increased their presence in the rural areas. There has been concerted effort by many MFIs to move from group lending to the poorest segments, to individual loans, and finally to more advanced micro businesses including farmers. At present, increasing numbers of MFIs are offering a full assortment of financial products to their clients. The expectation about microfinance to meet access to finance on agricultural sector has also subsided. Many MFIs focus on urban areas, and when they do work in rural areas, they finance projects other than primary agriculture for clients other than farmers.

The liberalisation of financial markets has barely had an impact on the amount of finance available to smallholder farmers. With few exceptions, the large majority of farmers still cannot obtain any agricultural credit. Both receiving working capital and investment loans in agricultural sector become practically impossible. After five decades of intermittent intervention and liberalisation of the financial market, the lack of agricultural credit is as pressing as ever. There is growing need to rethink of the mechanisms of agricultural finance and the role key stakeholders can play on the provision of sustainable agricultural finance.

1.2. Objective of the Paper

This paper aims at analyzing the different dimensions of agricultural finance and credit union with special reference to socioeconomic empowerment of farmers. The specific objectives of this paper are the following.

- Review the constraints in supply and demand including latest innovations on agricultural finance.
- Analyze situation of credit unions focusing on the socioeconomic empowerment of the farmers along with their problems and potentials on expanding the frontier of agricultural finance.

1.3. Organization of the Paper

This paper has been organized into four sections. After this introductory section, section two provides review of relevant literatures with a snapshot of constraints in supply and demand including latest innovations in agriculture finance. Section three analyze situation of credit unions focusing on the socioeconomic empowerment of the farmers along with their problems and potentials on expanding the frontier of agricultural finance and the report ends with conclusions in section four.

2. REVIEW OF LITERATURE

2.1. Supply of Agricultural Finance

Access to finance to agricultural sector continues to be largely overlooked by financial institutions. It has been found that much credit classified as agricultural by banks and financial institutions is in fact used for purposes other than farm production, such as agro-food processing or agricultural storage. There are many gaps in the agricultural finance due to the scarce provision of seasonal credit to smallholder farmers, the near-absence of medium and long-term financing for investment in animal husbandry and long-gestating crops such as fruit trees, and the lack of deposit/savings and payment services in remote areas. There are different financial services providers in developing countries that in principles are engaged in the provision of agricultural finance (Millers and Johns 2010). A discussion on financial service providers engaged in the supply of agricultural finance follows hereunder.

Commercial Banks: Commercial banks have potential to promote agricultural finance, but the role of commercial banks in agricultural finance is insignificant and agriculture constitutes just a small percentage of commercial bank loan portfolios in most countries. Commercial banks often have no offices outside of the main urban centers. Although commercial banks do finance some agro-processing units, agro-trading and related businesses, with the exception of some of the largest agricultural conglomerates, financing for primary farming is ignored and financing in rural areas is often neglected.

Agricultural Development Banks: These banks were established in the 1960s and 1970s in almost all the developing countries. Many countries have restructured Agricultural Development Banks to serve a wider clientele of urban and non-agricultural clients, and the use of credit subsidies has been reduced and/or eliminated. With commercial banks avoiding agriculture, agricultural development banks, or their successor institutions, continue to play a role in agriculture, and this includes serving smallholder farmers. However, with a few notable exceptions, such as BAAC in Thailand and BRI in Indonesia, the role of agricultural development banks is very limited to satisfy agricultural credit demand.

Microfinance Institutions and Credit Unions: MFIs and credit unions exist in almost all the developing countries. A smallholder farmer in search of a financial service relies upon MFIs and/or credit unions to meet their financial need for agricultural production.

Value chain finance: Value chain has emerged to be one of the important sources of finance in agriculture. This usually refers to the flow of funds to and through, or among the value chain. It uses an understanding of production, value added, and marketing process to determine financial needs and provide financing to those involved.

Leasing: There exist instances where agricultural leasing services are offered by banks, specialised companies, or directly as a service by the equipment providers. In most countries, there is not yet an established agricultural leasing practice.

Informal finance: Majority of borrower-farmers obtain their loans from informal lenders, which is not different from when the government was implementing supply-driven credit programmes at subsidised interest rates. Despite that interest rates charged by moneylenders are significantly higher than formal sector, moneylenders play a key role in the rural economy due to their capacity to respond urgent needs of the farmers immediately.

Agricultural insurance: In some countries agricultural insurance has been developed as a risk pooling arrangement and enhance the risk bearing capacity of the small farmers. Developing workable and affordable agricultural insurance for the poor farmers in remote rural areas is still a challenge in most development countries.

Guarantee funds: In some countries, governments, donors, or commercial companies offer guarantee funds for agriculture or for specific sectors or target groups of farmers or agro-entrepreneurs. These are meant to reduce the risk of lending but they have limited impact.

Public and donor funding: There has been significant public and donor funding in agriculture sector to promote research, extension, adoption and creating enabling environment for agricultural commercialization. These supports come in many forms such as concessionary credit lines, credit guarantees, direct subsidy or budget aid. International development partners have been particularly active in promoting rural microfinance, which has shown good results in terms of sustainability.

2.2. Demand for Agricultural Finance

Demand for agricultural finance is a derived demand and depends basically on investment and working capital need of the enterprises and projects under consideration. Different actors are engaged promotion and development of agricultural enterprises and project that can be systematically analyzed value chain analysis framework.

Table 1 summarizes the demand for financial services by the different value chain partners. As can be seen in the table, the first and foremost financing demand of farmers is to cover production costs such as seasonal labor, seeds, fertilizers, herbicides, pesticides, packaging materials, veterinarian services, medicines, water, electricity, fuels, and transport. Crop farming is characterized by periodic incomes after harvest, while production costs are incurred throughout the season. Credit demand in general reflects this seasonality.

Table 1: Demand for Finance within a Value Chain

Value chain partner	Role in the value chain	Demand for finance
Input suppliers	Provide seeds, fertilizers, chemicals, fuels, equipment, and sometimes-technical knowledge.	Working capital to buy and stock inputs in adequate amounts and at the right time. Provide these on credit to farmers.
Day workers	Provide seasonal labor.	Want to be paid by day's end.
Farmers	Grow crops and raise animals. May take part in some postharvest processing and marketing.	Working capital to buy inputs and pay seasonal labor. Capital or term loans for investment in equipment, storage, animals and land, including clearing hitherto unused land. Payment services, saving products, various types of insurance including crop insurance.
Farmers' organizations (e.g. associations, Cooperatives)	Bulking inputs and/or farmer outputs to gain economies of scale and better prices. Advocacy, access to technology.	Working capital to buy farm inputs for distribution to farmers. Working capital to buy produce from farmers for delivery to traders or other off-takers. Capital or term loans for investment in storage, transport and (pre) processing facilities.
Rural traders Collection centers	Buy agricultural produce and bulk-sell it. Sometimes testing and quality certification.	Working capital to buy agricultural produce. Capital or term loans for investment in storage facilities, transportation equipment or testing/certification equipment. Insurance.
Processors	Transform the product into a marketable commodity or consumer product.	Working capital to buy agricultural produce. Capital or term loans for investment in production facilities. Insurance (calamities, theft, loss).
Distributors, wholesalers	Sell to local retailers, supermarkets.	Working capital to buy processed agricultural products. Working capital to provide stock finance to retailers. Capital or term loans for investment in storage facilities and transportation equipment.
Exporters, importers	Sell to international buyers (commodities or processed products).	Working capital to buy processed agricultural products or unprocessed agricultural commodities. Factoring/forfaiting services (on behalf of suppliers). International trade finance (e.g. L/C). Insurance (calamities, theft, loss).
Retailers	Sell to consumers.	Working capital to buy processed agricultural products. Capital or term loans for investment in shop inventory. Insurance (calamities, theft, loss).
Consumers	Consume the product!	Personal loans or salary advances.

Source: adapted from "Value Chain Finance" (KIT/IIRR, 2010).

Farmers also need savings and insurance products for proper risk management. Farmers are confronted with high performance risk like crop failure; and market risk such as no clients, low prices, which can be mitigated through a combination of access to saving and access to short-term credit. Furthermore, access to credit and savings products is essential to optimize the agricultural and financial cycles. For example purchase inputs when these are cheap and sell produce when it is expensive. Poverty often forces farmers to sell crops when the time is not right. Without access to finance, farmers remain in low-investment/low-productivity agricultural operations. Farmers can also make good use of insurance products for risk management. Furthermore, farmers need and demand credit to invest in equipment, animals, and infrastructure. There is also a huge need for the financing of warehouse infrastructure, local feeder roads and irrigation systems. The financial need for the latter mostly exceeds the capacity of individual farmers and farmer groups, and calls for a public response.

2.3. Constraints to Promoting Agricultural Finance

Farmers often live in areas that are hard to reach with traditional financial services. In addition, they face climate and price risks, seasonal demand for products, and fluctuating labor and capital. Many of these risks and challenges such as droughts, floods, pests, or diseases are beyond the control of farmers; within region, they are often subject to the same weather and climate risks, making it hard for financial service providers to hedge them. Consequently, providers find it difficult to finance agricultural activities (Miller 2013).

The nature of the flow of capital is a further challenge to both borrowers and lenders. Because agricultural production (crops and livestock) in general has a slower turnover than other microenterprise ventures traditionally funded by MFIs, agricultural credit generally requires longer loan terms and is vulnerable to unpredictable and potentially lower returns on capital. Consequently, it entails higher risk and is much more sensitive to interest rates than traditional microfinance (Miller 2011).

In addition, agricultural credit requires adjustments that differentiate it from typical microenterprise loans. Because cash outflows for inputs, capital, and some labor occur at the beginning of the season and cash inflows occur primarily at harvest time, agricultural loans often require the loan principal to be paid at maturity rather than throughout the loan period. Interest may also be paid at maturity, at the beginning of the loan, or periodically (either at fixed or flexible intervals) throughout the loan period.

Agence Francaise de Developpment (2012) has identified following seven constraints for the expansion of agricultural finance in rural areas.

- High delivery cost, proximity
- Weak farming practices and farmers
- Lack of banking technology
- Collateral
- Exogenous risks
- Government intervention and
- Weak collaboration with farmers

Miller (2004) identified twelve different constraints on rural finance classified into four broader groups as under.

- Vulnerability
- Operational
- Capacity
- Political and regulatory

These constraints to rural finance[1] are presented in Table 2.

[1] Rural finance refers to financial services provided in rural areas for agricultural as well as non agricultural purpose. Agricultural finance, primarily a subset of rural finance, is dedicated to financing agriculture-related activities such as inputs, production, storage, processing, and marketing of goods.

Table 2: Constraints on Rural Finance

Categories of constraints		Type of constraints
Vulnerability	1 2 3	Systemic or covariant risk (the same type of risk occurring at the same time) Market risk (fluctuation of prices) Credit risk (lack of collateral)
Operational	4 5 6	Low investment returns (rural capital turns over slowly, low profit margins, seasonality results in uneven cash flow) Low investment and assets (weak safety net) Geographical dispersal and low population densities
Capacity	7 8 9 10	Weak rural infrastructure Low level of training and technical capacity of the rural population Social exclusion (cultural, linguistic) affects market and financial integration Limited institutional capacity (weak support systems)
Political and regulatory	11 12	Political interference (subsidized and/or directed credit from state-owned banks, debt waivers, interest-rate caps) Regulatory constraints (land tenure laws, banking laws, arbitrary taxation)

Calvin Miller. 2004. "Twelve Key Challenges in Rural Finance" FAO Rural Finance Workshop, 28 Oct. FAO, Rome

Addressing different constraints of agricultural lending require a deep assessment and understanding for planning and monitoring loans, which is a major reason why MFIs and banks are typically not interested in them. However, the changing nature of agriculture is providing ways to use the agricultural value chain to accomplish much of this risk assessment and monitoring. For this several new innovations has emerged to address finance in agriculture which as been discussed in next sub-section.

2.4. Innovations in Agricultural Finance

There have been numerous initiatives to improve the provision of agricultural finance, for smallholder farmers in particular over the last one decade. Many of these innovations show great promise in strengthening agricultural and hence rural livelihoods, although none is a universally applicable cure. Great progress was recently made in reaching out to smallholder farmers through a variety of financial services. In truth, most innovations are not new, and some date back decades, centuries or even millennia. What is new, however, is agricultural financing in new situations and for farmer types that were un-bankable before i.e. smallholder farmers in particular. Such innovations tend to combine several financing concepts, and are nearly always embedded in value chain development.

Agence Francaise de Developpment (2012) has documented followings innovations which as been used with mixed success in different parts of the world.

- Member-owned localized finance such as credit unions, rural banks, microfinance
- Agricultural leasing
- Value chain finance, including contract financing and out grower schemes
- Agricultural factoring
- Warehouse receipt finance
- Processors

- Credit guarantees
- Insurance (index) to support credit
- Price smoothing
- Technology: mobile banking (cell phone, mobile van); biometrics
- Extension services, financial literacy

2.5. Approaches to Agricultural Finance

In a broader sense, there is two approaches enhance access to agricultural finance: financial sector approach and value chain approach.

2.5.1. Financial Sector Approach

The first approach uses the financial sector as an entry point and emphasizes the important role of financial institutions for facilitating access to wide range of services. There are number of unresolved issues surrounding this approach, particularly in terms of governance, which itself implies issues of institutional type and methodological approaches, size and geographical expansion, and linkages with urban finance. Finding answers to these issues will help determine the success factor for agricultural finance. This approach involves building long-term capacity and finding incentives for institutions to offer financial services to the rural and agricultural sector.

2.5.2. Value Chain Approach

This approach takes the production chain as an entry point, and examines the financial services that could be proposed all along the value chain from input supplier, processors, intermediaries to buyers, etc. This approach is commonly combined with commercialization activities and even technical assistance. Value chain finance has a long history in integrated chains like the cotton sector in West Africa or coffee chain in Latrin America. This form of finance is based on secure guarantees and an integrated approach. Hence, this approach is considered a good way to reduce risk of non-repayment. This type of financing has been the principal vector for financing certain agricultural export chains.

2.6. Agricultural Finance: Fulfilling an Unmet Need

Small farmers play a critical and often undervalued role in ensuring global food security. When food supply is threatened and global commodity prices rise, the work of small farmers becomes more important than ever. Their crops feed not only their own local communities, but also the millions of people migrating to crowded towns and cities (WOCCU 2009).

Without affordable financial services, reliable information on market demand or direct market linkages, many small farmers remain in the unprofitable trap of low-investment and low-return production cycles. They also need improved inputs to break into more profitable commercial production. But many of them do not have capital to invest at the outset, own traditional forms of collateral or even have safe places to save their money. Small farmers who do have access to bank loans frequently find the terms to be too rigid, the amounts too small or fees too high to permit the kinds of investments that can significantly increase production. As a result, they often borrow from family, friends or moneylenders, who typically charge high interest rates and have limited potential to expand (WOCCU 2009).

In some cases, small farmers borrow their working capital from other non-financial participants within the value chain (whether formal or informal), such as input suppliers, associations, buyers or traders. While borrowing from these sources may be appropriate in some situations, it offers little transparency and can put significant constraints on financing due to the lenders' limited liquidity and lending knowledge.

Many financial institutions have been hesitant to work with value chains because of the complexity of relationships and the risks, costs and partnerships associated with financing them. Credit unions, however, make promising partners in value chain finance due to their deep community ties, presence in rural areas and lending experience with low-income individuals and small firms. And they are finding new ways to manage the risk of lending to these important producers (WOCCU 2009).

The right finance at the right time can mean greater efficiency, improved product quality and increased incomes (USAID).

3. RESULTS AND DISCUSSIONS

3.1. Credit Union: Definition

Credit unions, called by various names around the world, are financial cooperatives that provide savings, credit and other financial services to their members. Credit union membership is based on a common bond, a linkage shared by savers and borrowers who belong to a specific community, organization, religion or place of employment. Credit unions worldwide offer members from all walks of life much more than financial services. They provide members the chance to own their own financial institution and help them create opportunities such as starting small businesses, growing farms, building family homes and educating their children. In some countries, members encounter their first taste of democratic decision making through their credit unions (WOCCU 2009).

Credit union often spawns from existing informal groups, such as employees, farmers or local entrepreneurs who pool their savings. Thus, in the startup phase, they rely on internal capital and savings only. In subsequent phases, credit unions with excess liquidity start borrowing from banks, financial institutions and apex bodies. But their financial performance is mixed. Indeed, stories abound of credit unions institutions collapsing under bad debt, management fraud, abusive leadership, or insider lending. There is severe governance problem in most credit unions.

3.2. Credit Union Operation

Credit unions are decentralized and member controlled rural finance institutions. Membership in a credit union is voluntary and open to all within the accepted common bond of association that can make use of its services and are willing to accept the corresponding responsibilities. Credit union members enjoy equal rights to vote (one member, one vote) and participate in decisions affecting the credit union, without regard to the amount of savings or deposits or the volume of business. Voting in credit union support organizations or associations may be proportional or representational, in keeping with democratic principles. The credit union is autonomous, within the framework of law and regulation, recognizing the credit union as a cooperative enterprise serving and controlled by its members. Credit unions are non-discriminatory on all grounds, including but not limited to race, orientation, nationality, sex, religion and politics.

Credit unions are an essential component of rural finance. They are managed by their members, and each member is owner of the entity, equal rights (one person one vote). Salaried staff or volunteer office bearers is responsible for technical management. Faced with difficulty of mobilizing savings in rural areas, the basic principles of preliminary savings, and the cooperative model in general, have undergone adaptation. To encourage thrift through savings and thus to provide loans and other services, a fair rate of interest is paid on savings and deposits, within the capability of the credit union. The surplus arising out of the operations of the credit union after covering the cost of finance, operating costs, provisions for loan losses and ensuring appropriate capital reserve levels, belongs to and benefits all members with no member or group of members benefiting to the detriment of others. This surplus may be distributed among members in proportion to their transactions with the credit union, as dividends on shares or directed to improved or additional services required by the members. A prime concern of the credit union is to build the financial strength, including adequate reserves and internal controls that will ensure continued service to membership. Credit union services are directed to improve the economic and social wellbeing of all members.

Credit unions actively promote the education of their members, officers and employees, along with the public in general, in the economic, social, democratic and mutual self-help principles of credit unions. The promotion of thrift and the wise use of credit, as well as education on the rights and responsibilities of members, are essential to the dual social and economic character of credit unions in serving member needs. In keeping with their philosophy and the pooling practices of cooperatives, credit unions within their capability actively cooperate with other credit unions, cooperatives and their associations at local, national and international levels in order to best serve the interests of their members and their communities. Continuing the ideals and beliefs of cooperative pioneers, credit unions seek to bring about human and social development. Their vision of social justice extends both to the individual members and to the larger community in which they work and reside. The credit union ideal is to extend service to all who need and can use it. Every person is either a member or a potential member and appropriately part of the credit union sphere of interest and concern. Decisions should be taken with full regard for the interest of the broader community within which the credit union and its members reside.

In general, creating and maintaining credit unions, as decentralized, member-controlled rural financial institutions are difficult, even with strong support from an apex body and international assistance. The small size of the credit union and educational limitations of the members hamper management and control; there may be a conflict of interest between the institution and its shareholders, who double as clients, and it is hard to maintain solidarity under adverse circumstances. Some credit union focus too much on credit and not enough on savings, and end up attracting the wrong type of clients.

Just like all other financial institutions that manage savings at large, these institutions need to be supervised either by a public body like a central bank or a strong apex body. However, in many developing countries, the supervisory framework for credit union is weak because no public institution wants to be supervising so many small financial operators. Those credit unions that do manage to develop, often find it hard to source external financing. There is little graduation from micro to small enterprises, resulting in a very high cost for micro lending. Lack of term capital makes it hard for most credit unions to offer investment credit. There is lack of outreach due to capacity and in spite of the ubiquity of credit unions; large segments of the rural population continue to be excluded from financial services. In general most credit unions focus on salaried members, and mainly provide consumer credit. Finally, due to self-selection, the poorest segments of the population are often excluded.

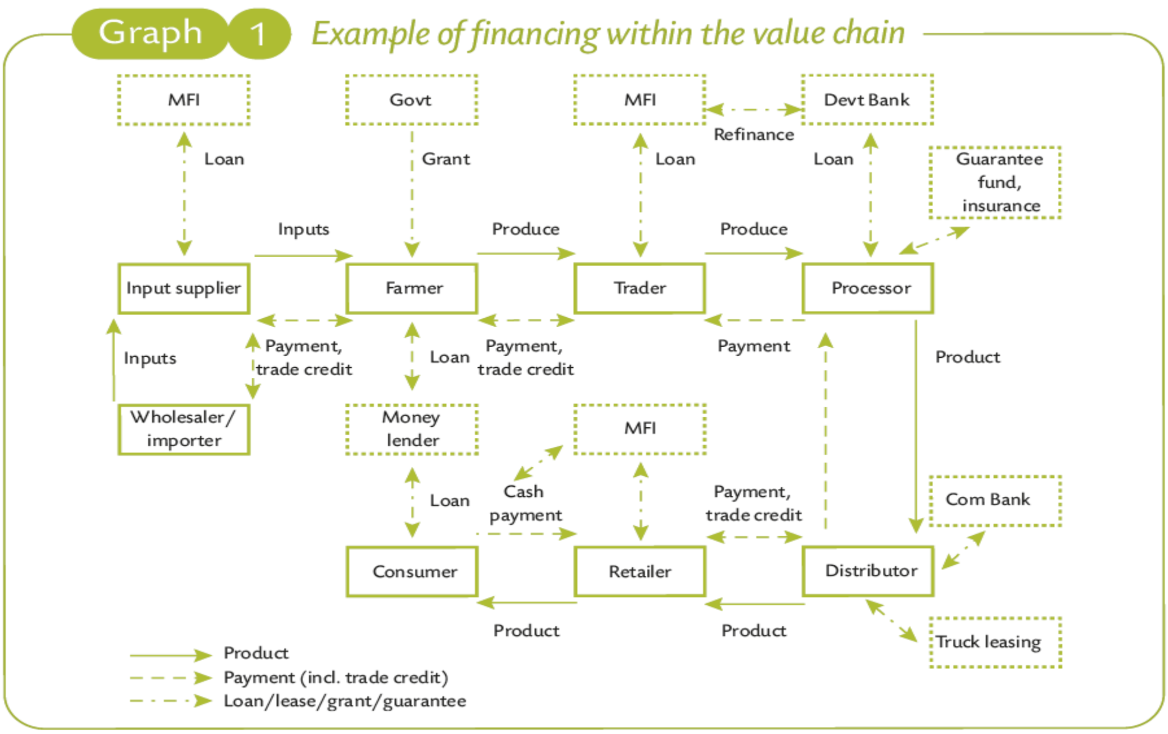
The sparse data on the loan portfolios of the credit unions consistently show that loans are typically rural rather than agricultural, which is understandable as these credit unions face the same constraints and risks as banks. Nevertheless, examples exist of successful credit unions that concentrate on agriculture. They are taking initiatives to expand their geographical outreach and develop services for smallholder farmers. This shows a commitment to development and offers great scope for increasing the role of credit unions in financing smallholder farmers.

The innovation in credit unions consists in developing viable means to serve the rural poor cost-effectively by bringing down transaction costs, and managing agricultural risk. Overall, credit unions have made great achievements, but they can do more to play its full role in agricultural finance.

3.3. Integration of Several Financial Providers within a Value Chain

A variety of agricultural finance providers and instruments can be integrated within a value chain. Different value chain partners can use different finance providers offering different services or several of them simultaneously, as depicted in flow chat in next page.

Figure 1: Example of financing within the Value Chain



Source: Agence Francaise de Developpment. 2012. "Creating Access to Agricultural Finance: Based on a horizontal study of Cambodia, Mali, Senegal, Tanzania, Thailand and Tunisia".

In most countries, rural traders and farmers would most often rely on a combination of informal finance, credit unions, MFIs and simple trade credit. Agro-processors and distributors would normally have access to banks, and occasionally to leasing facilities. Sometimes, one finance provider uses another (through refinancing) to reach a client group normally beyond its reach. Coordination among the various finance providers would be useful for risk management. However, there are also examples where one single financial institution finances most or all of the value chain partners (e.g. BAAC in Thailand for rice).

3.4. Comparative Advantages of Credit Unions

As discussed there are seven constraints for agricultural finance and there have been several innovations to tackle specific constraints in agricultural finance and reduce lending risks. Relationship between constraints and innovations are presented in Table 4 indicates that credit unions has a potential to address four out of seven constraints in supply and demand for agricultural finance as under.

3.4.1. High Delivery Cost, Proximity

By virtue of local presence, credit unions are very much suitable to address the issues of distance, isolated and dispersed populations, and poor road and energy infrastructure make. They have the comparative advantage of operating in remote rural areas where it is difficult and expensive for financial institutions to open branches in rural areas and to serve and monitor clients. They are characterized by working in rural areas and even in small market and offer their shareholder the individual loans, savings accounts, and payment transactions. They have potentials of providing services to the farmers in their proximity.

3.4.2. Lack of Banking Technology

Credit unions located in rural areas have good knowledge of agriculture and many rural credit unions have developed the financial products that respond to its specificities, because agriculture is only lending activities to these institutions. They are capable of analyzing a farming household with typically mixed farms and many activities and many unknown factors. They also have required workforce with hand-on experiences on agricultural lending. They have financial service products that take into account the specificity of agriculture, such as seasonality in payment e.g. only after the harvest, or a lengthy investment period without cash flow for long gestation products, such as fruit trees or heifer cows. They are better positioned to design credit repayment proposals that matches the reality of farming.

Credit unions start small and operate small for initial few years. Their shareholders can easily provide the types and volume of information they demand. There are credit unions, which reduce the cost of lending by using group methodologies like involving farmers’ associations and involving technical operators through value chain finance. Being a local presence, they better know their clients and personal identification is not a major issue to credit union. Getting clients' credit history is quite easy for the credit union.

Table 3: Innovations in Agricultural Finance: Constraints Targeted and Applicability

Innovations	Constraints targeted						
	High delivery cost, proximity	Weak farming practices and farmers	Lack of banking technology	Collateral	Exogenous risks	Government intervention	Weak collaboration with farmers
	1	2	3	4	5	6	7
Member-owned localized finance (e.g. Credit Unions), rural banks, microfinance	✓		✓	✓			✓
Agricultural leasing			✓	✓			
Value chain finance, including contract financing and out grower schemes	✓	✓	✓	✓	✓		✓
Agricultural factoring			✓	✓			
Warehouse receipt finance		✓	✓	✓	✓		
Credit guarantees				✓			
Insurance (index) to support credit	✓			✓	✓		
Price smoothing					✓		
Technology: mobile banking (cell phone, mobile van); biometrics.	✓		✓				
Extension services, financial literacy		✓			✓		✓
Total	4	3	6	7	5	0	3

Source: Agence Francaise de Developpment. 2012. "Creating Access to Agricultural Finance: Based on a horizontal study of Cambodia, Mali, Senegal, Tanzania, Thailand and Tunisia".

3.4.3. Collateral

Compared to banks and financial institutions, credit unions have invented several collateral substitutes that enable small-scale entrepreneurs to have access to finance for their enterprise. Group lending, character based lending, savings linked lending, use of cosigners, etc. are some of the collateral substitutes that that most credit union to provide access to finance to their poor shareholders.

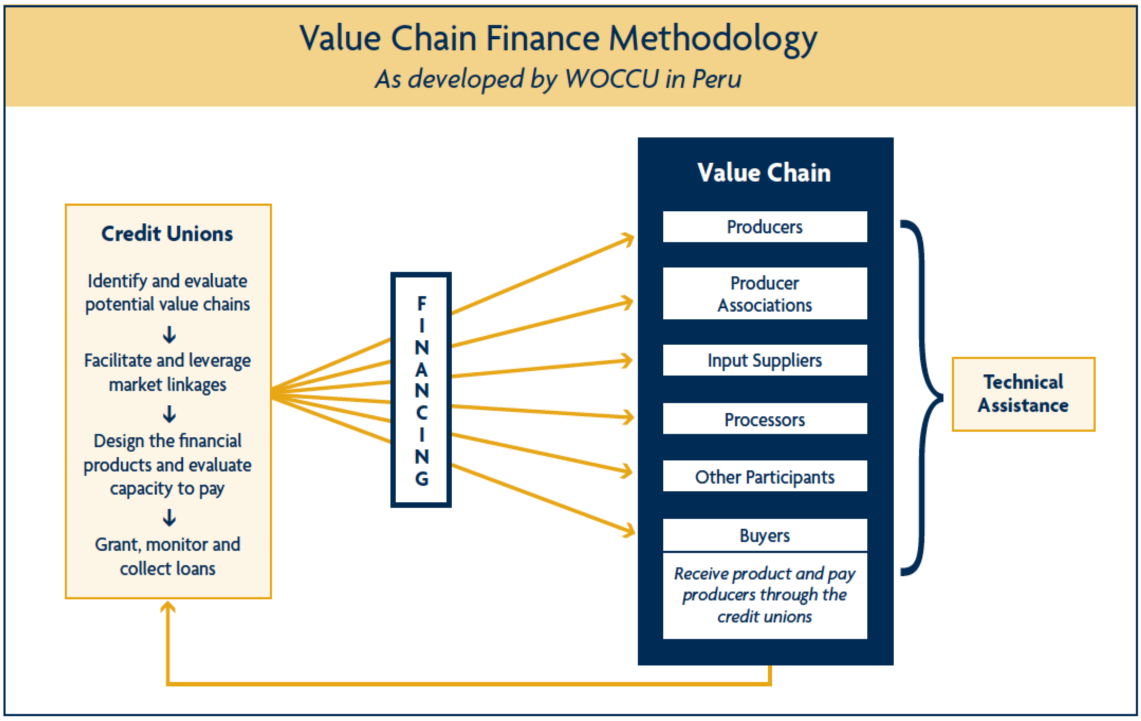
3.4.4. Weak Collaboration with Farmers

Credit unions have very strong collaboration with farmers. It has been strengthened due to member-based nature of their ownership. The relationship between credit union and farmers has been further reinforced service delivery approaches and methodologies they have adopted. Peer pressure lending as well as operation of several sub-committees has strengthened their collaboration with farmers. Joining forces in obtaining farm inputs, selling products, negotiating credit, and even creating mutually owned companies that operate within the value chain, can greatly help farmers. This type of cooperation increases farmers' bargaining position with traders and financiers, helps them access and develop technology, and has huge scale advantages through the bulking of inputs and outputs.

3.5. Credit Unions in Value Chain Finance

WOCCU is working with credit unions in Peru and Kenya to develop sustainable models for agricultural finance that benefit both the credit unions and the value chain participants they serve. As the small farmers move into more profitable small-scale commercial production, WOCCU's methodology ensures they will have access to the financial services they need to continue growing long after the WOCCU program has closed.

Figure 2: Value Chain Finance Methodology



WOCCU value chain finance methodology operates under following four phases.

- Phase 1: Identify and evaluate potential value chains i.e. value chain are market driven,
- Phase 2: Facilitate and leverage market linkages i.e. relationship are key,
- Phase 3: Design the financial products and evaluate capacity to pay i.e. ensure that financial products meet specific needs,
- Phase 4: Grant, monitor and collect loans i.e. disbursement and collection technique reduce risk

Access to finance is ensured at different layers in the value chains, i.e. producers, producer associations, input suppliers, processors, other participants and buyers. Credit union receive product and pay producers. Success of the value chain finance essentially depends on selection of appropriate crop. The farmer, buyer and credit union should be involved in deciding which crop is best suited for the value chain. Some factors to consider include crop value, market demand, availability of inputs, ease of transport, climate and growing conditions, farmer's experience and ability to perform labor.

3.6. Risk Management in Agricultural Lending by Credit Union

Credit union manages risk at every steps of agricultural lending. A discussion on key risk management strategies follows hereunder.

Table 4: Key Risk Management Strategies on Agricultural Lending

Main steps	Key risk management strategies
Ensure Market Demand for Crops	Loans are made only for crops with reliable buyers that have already been contracted. Crops to be financed are selected according to local conditions as well as the farmers' technical experience and ability to perform labor.
Create Proper Policies and Procedures	The credit union addresses the following risks when establishing the policies and procedures for value chain financing: geographic distance from the borrower, weather, crop failure and the use of balloon payments at the end of the production cycle.
Assess Real Financing Needs	Loan officers use WOCCU tools to conduct pre-loan surveys that evaluate the total cost of production based on available land, expected yield, pricing of inputs and labor. They base the loan amount on the evaluation.
Establish Appropriate Guarantees on Individual Loans	Credit unions are able to lend to small farmers without requiring traditional forms of collateral. In Peru, loans are guaranteed by a combination of collateral and signed contracts with other value chain participants. In Kenya, individual loans have group guarantees. If one farmer fails to pay, the other farmers in the group are responsible for repaying the loan. As a result, group members monitor and help each other with farming activities. Credit unions in Kenya may also use crops as collateral.
Diversify the Loan Portfolio	WOCCU recommends credit unions invest no more than 30% of their total loan portfolios in agricultural production. They should further diversify the agricultural portfolio by financing a variety of crops in different geographic regions.
Adapt Loan Terms According to Crop Seasons	Loan terms are structured around the production cycle of different crops. Repayment occurs after harvest, once the purchase contract is fulfilled.
Distribute Loans in Vouchers	When possible, borrowers receive the loan in the form of vouchers to purchase inputs from pre-approved suppliers during different phases of the production cycle. The farmers are also able to borrow small amounts of cash to pay field laborers if necessary.
Encourage Farmers to Diversify Crops	Crop diversification helps ensure that small farmers will not become dependent on a single crop. It also encourages commercial production beyond the traditional crops they grow to feed their families.
Monitor Crop Performance	Agricultural loan officers and other technical assistance providers visit the farmers

Main steps	Key risk management strategies
	throughout the growing season to provide technical support and monitor production.
Receive Payment through the Credit Union	Buyers pay the credit union directly for crops they receive from the farmers. The credit union deposits the remaining profits into the farmers' savings accounts after deducting the loan amount, thus promoting savings while recovering the loan.

3.7. Credit Union and Socio-economic Empowerment of Farmers

Access to finance is key to improving rural productivity, employability and income-earning opportunities, enhancing food security and promoting environmentally sustainable rural development and livelihoods options. Despite poor farmers' major role in agriculture and other rural activities, higher barriers in education and training limit their participation in more productive and remunerative work, perform managerial and leadership roles and participate fully in the development of their communities. Targeted action is needed to dismantle these barriers. Credit unions that focus at bring targeted poor farmers as shareholders and works on enhancing access to finance (savings, credit, payment, insurance) has a paramount role on socio-economic empowerment of farmers.

As observed, farmers rely on agriculture for their livelihoods, which are growing more uncertain due to the threats of climate change, the recent food and financial crises, and falling investments in agriculture. The marginal farmers' become most vulnerable. They become the poorest of the poor. Although access to financial services may prove crucial, credit unions need to fill the needs of the farmer-members to improve their lives by linking them to the non-financial services extended by different government and non-government organizations.

Credit unions provide financial services to farmers. Owing to their size and operation, they exist in areas where the existence of other financial service providers is not feasible. Besides providing financial services, there is a need for credit unions to be more active in making use of the available technical expertise of specialized agencies and work as an intermediary of the agencies working on watershed development, livelihood promotions, organic farming, agriculture extension services, environmental impact assessments, training and capacity building, education, skills development and financial literacy among farmers and enhance the empowerment mission of their shareholders.

4. CONCLUSIONS

Farmers and rural populations, in general, in developing countries have always found it difficult to obtain credit financing. Most farmers in developing countries have no access to any kind of financial services (payments, safekeeping and savings, credit, insurance), which hampers the efficiency and security of their operations. Despite a well-developed credit delivery structure the pace of agricultural financing is declining, regional imbalance is widening and share of small farmers in banks and financial sector is declining. Many farmers struggle to pay their seasonal harvest inputs, and investing in agricultural technology and expansion is even more difficult. Lack of access to finance is one of the reasons why agricultural productivity in developing countries is very low.

Recent studies confirm that the lack of agricultural finance is as pressing as ever. In spite of government programs undertaken over the years, supply and demand for financial services continues to be mismatched, both in terms of types and volume of services. Key constraints on supply and demand for agricultural finance includes high delivery cost and proximity; weak farming practices and farmers, lack of banking technology, collateral, exogenous risks, government intervention, and weak collaboration with farmers. Past government policies have not been able to remedy these constraints. Nonetheless, recent innovations in agricultural finance have created renewed interest in the sector. Such innovations, among others, include value chain finance approaches involving traders, processors, warehouse receipt finance, agricultural (index) insurance, and (rural) microfinance.

Numerous studies have shown that access to finance from credit union – generally based on short term loans of modest amounts – can have a positive impact on the cash position of rural households, enhance the smoothening of their consumption and to a certain degree strengthen their resistance to economic shocks. However, many observers question the real ability of access to finance from credit unions to stimulate household accumulation process and to contribute to productive investment especially in agriculture. The financing of agriculture has specific constraints in terms of client diversity, the services necessary and in terms of risk. These factors help to explain the extreme caution of most banks and financial institutions with regard to agricultural finance.

Credit unions are the effective instrument by which very poor can access hassle free formal credit without any collateral security and simultaneously improve their thrift habits. They have operated in isolated pockets and proved financial services to their shareholder farmers at the doorsteps. Credit unions have potential to address four out of seven constraints of agricultural financing namely: high delivery cost and proximity; lack of banking technology, collateral, and weak collaboration with farmers. On the agricultural value chain finance front, credit unions are very much suitable to enhance access to finance to producers, producers associations and input suppliers and there are instance where credit union has catered their services to this layers of the value chain. This modality successfully builds upon the self-help potential of the target group. Due to enhance education of the people and their opportunity to build common fund for investment, they are induced to a considerable improvement in their economic situation.

Besides providing financial services, credit union should be more active in making use of the available technical expertise of specialized agencies and be position themself as an intermediary between their shareholders and agencies providing diverse services such as watershed development, livelihood promotions, organic farming, agriculture extension services, environmental impact assessments, training and capacity building, education, skills development and financial literacy among farmers. Such a role of the credit union will be instrumental on the empowerment of their shareholders.

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