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## **SUPPORT MODELS FOR SMALLHOLDER FARMERS’ TRANSACTION; EVIDENCE FROM MOZAMBIQUE**

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### **Abstract**

This study aims to assess different supporting organization models that provide technical, market linkage or other support for smallholder farmers constraints to link them to processors/traders, while reducing transaction costs. We considered as supporting organizations the NGOs, governmental agencies, financial institutions, and private sector involved in supporting the smallholder farmers. The focus will be on organizations that are part of organizational environment. These organizations are the facilitators for transactions between smallholder farmers and their buyers - processors/traders. This paper explores these supporting organizations, drawing on the experience of five different organizations involved on soybean production in Mozambique. Different supporting organizations acting in the same community were observed with different role for smallholder farmers’ constraints.

**Key words:** Supporting organization; smallholder farmers; NGO; Mozambique



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## **SUPPORT MODELS FOR SMALLHOLDER FARMERS’ TRANSACTION; EVIDENCE FROM MOZAMBIQUE**

### **1. Introduction**

Smallholder farmers, in general and in Mozambique as well, face problems with participation in value chain due to high transaction costs, and the supporting organizations can reduce these costs. According to World Bank study (2006 a), one of the main development challenges in Africa is the delivery of agricultural services (marketing, input supply, financing and other support) to smallholder farmers. There is also a lack of necessary production and marketing information, particularly for new crops. There are several problems related to smallholder farmers highlighted by Poulton et.al. (2010), such as the geographical dispersion of them, which results in difficulties for managers to monitor their production; limited access of financial loans; limited political voice, as a result of their low education, and limited economic power.

As it is difficult to access smallholder farmers individually due to low scale production, logistic problem, and so on, the solution hinted for these hindrances is the collective action into producer organizations (Penrose-Buckley, 2007; Poulton et.al., 2010). Collective actions in agriculture can be performed in different forms, such as cooperatives, farmer association, and informal groups of producers (Chaddad and Cook, 2004; Chirwa et.al., 2005; Penrose-Buckley, 2007). Smallholder farmers through collective action can receive services that would be too costly to achieve individually. The services can be divided into four groups, based on Poulton et. al. (2010): output markets; financial services; input supply (seeds, fertilizers, and chemicals); agricultural extension.

When smallholder farmers are not organized, they mostly deal individually with obtaining inputs and selling their production. Consequently, they do not obtain advantageous prices as those larger groups. Moreover, the companies often prefer signing contracts with more capitalized growers. The interest of companies dealing with large-scale farmers is the fact that if the transaction costs associated with organizing multiple small scale farmers to deliver their production prove prohibitive, then the larger farmers will be more efficient. To reverse this situation, the smallholder farmers should be part of an organization that acts as a large unit with coordinated management to reach the requirements of companies. The producer organizations improve the lives of small-scale producers by helping them to increase

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their production. Yet small-scale producers have to adopt a market-oriented approach if they want to compete in and benefit from local, regional, and global market (Penrose-Buckley, 2007).

Organizations are groups of individuals who have common interests and act collectively because acting individually would be impossible or too cost to reach their interests (Olson, 1965). The smallholder farmers participate voluntarily in an organization due to their individual interests combined with the group. In other words, their profits acting collectively are superior than acting individually. The reason for arising an organization is related to different factors, such as minimizing the transaction costs, providing conflict solutions, reaching the scale production, altering the rules of game in favor of the participants (Saes, 2000). Therefore, organizing smallholder farmer means reaching economies of scale and reducing transaction costs, which is beneficial for both farmers and companies. By working through producer organizations, companies can reduce cost on searching the farmers' production and delivering services to them. On the smallholder farmers' side, they might be in better position to reduce transaction costs, to access to necessary market information and to new technologies, to participate in high value markets, and to bargain and enforce the agreements with the buyers (Kaganzi, et.al., 2009; Shiferaw, et.al., 2011).

The producer organizations, such as group, association and cooperative, are being asked to play an increasing role in supporting commercial agricultural development among smallholder farmers in Sub Saharan Africa (Chirwa et.al., 2005). However, before having the producer organization, the supporting organization is required to organize the smallholder farmers because they are not capable to do by themselves in Mozambique. The supporting organizations have activities, such as forming an organization, instructing the smallholder farmers, following them, and triggering the management of their organization by themselves.

The supporting organizations have different background and different focus; then there are different supporting organization models. They can be the NGOs involved in supporting the family farmers, or governmental agencies that support family farmers, financial institutions, and so on. The main question for this study is: "What models do supporting organizations use to support programs for smallholder farmers in linking them to food, feed, and fuels markets?"



These supporting organizations apply different models to target different smallholder farmers' constraints. They may provide services to the smallholder farmers, broker contacts with other service providers such as banks or facilitate engagement of the farmers with the buyers. The supporting organization support smallholder farmer as intermediaries and play an important role in organizing them to being able to engage in a production system.

The main objective of this study is to assess supporting organizations that facilitate the transaction between smallholder farmers and industry/trader to identify their models. The focus of this study is on organizations that are part of organization environment. Our basic argument is that these organizations are the facilitators for transactions between smallholder farmers and their buyers; consequently, they minimize the transaction costs. The research design type of this study is the multiple case studies, based on the experience of five different supporting organizations involved on soybean production in Mozambique. There is not a single supporting organization model that is the best and would suit all smallholder farmers' constraints. The supporting organization models are not static either; changes are being made all the time to address certain constrains.

This article is organized in seven parts. Following the introduction, the second part presents an overview of Mozambique. Part three presents the theoretical framework. Part four presents the research design and the methods of data collection. Part five presents the cases selected. Part six discusses and assesses the models of supporting organization. Part seven is the conclusion.

## **2. Background on Mozambique**

Mozambique is located in southeastern sub-Saharan Africa bordered by the Mozambique Channel, with South Africa to its south and Tanzania to its north. The country's total area is 799,390 km<sup>2</sup>. Its climate is tropical to subtropical. Of the total land area, 36 million ha are arable, of which approximately 10% is under cultivation (Schut et.al., 2010). Mozambique gained its independence in 1975, but being financially deficient, it was one of the poorest countries in the region. In 1987, the government established a series of macro-economic reforms designed to stabilize the economy. These steps, combined with donor assistance and political stability, have led to dramatic improvements in the country's growth rate. As of 2008, the GDP for Mozambique was \$19 billion, with an ongoing growth rate of



about 7%. Yet, with these successes, 70% of the population continues to live in poverty (World Bank, 2008).

The population of Mozambique is approximately 21.7 million, with 81% of the labor force involved in agriculture. The remaining 20% is involved in the industrial, transport, communication and service sectors (Schut, et.al., 2010). 3.2 million of smallholder farmers compose the agricultural sector and the majority of them, about 84%, work on staple food crops (World Bank, 2006 b). For 2007, the HDI indicated adult literacy rates of 44.4% for the population of 15 years and above (UNDP, 2009). Mozambique's agriculture sector represents 24% of GDP, with primary exports of cashews, cotton and sugar (Shut, et.al., 2010). Other agricultural products include tea, cassava, maize, coconuts, sisal, citrus, tropical fruits, potatoes, sunflowers, beef and poultry.

Mozambique faces widespread poverty that is claimed to be the result of historical factors, such as Portuguese colonization and recent independence, and the armed conflicts that triggered the destruction of most of Mozambique's commercial and transport infrastructure, educational and health systems (Schut et.al., 2010). In the agricultural area, the smallholder farmers are characterized by a limited use of inputs, such as fertilizers and seeds and limited access to credit to purchase these inputs. A lack of storage facilities and little knowledge of how to handle the goods after harvest are other constraints for the smallholder farmers. Moreover, the poor transportation damages the connection of smallholder farmers to local markets. In the majority of the country, producer organizations are non-existent or very weak and smallholder farmers have few opportunities to market their goods. In addition, access to relevant market information is another constraint for smallholder farmers to participate in the market.

The Mozambican government considers the relevance of collective action of smallholder farmers. We observed that there is a department in the Province Directorate of Agriculture responsible for smallholder farmers associations. The smallholder farmers in Mozambique are not capable to organize by themselves and the supporting organization intervention, such as governmental agricultural extension technician, has an important role to organize them into producer organization. The governmental agricultural extension technicians motivate the smallholder farmers to organize into association in order to facilitate their work and to make the agriculture program more effective. Moreover, the institutional

environment in Mozambique with the Decree 2/2006 for associations and the new Cooperative Law – Law n. 23/2009 provide a legal framework for a new generation of farmers’ organizations.

We observed that the Mozambican government is not able to attend all the smallholder farmers’ needs due to the lack of resources. For example, the government agricultural extension technicians have difficulties to reach the smallholder farmers because of lack transport, fuels for the cars, and the reduced number of technicians to attend all smallholder farmers. Then the NGOs fulfill the gap that the government left and work as partners. There are 106 NGOs working with agricultural issues and attending 112 districts from the total of 128 districts of Mozambique (table 1).

Table1. Distribution of agricultural technical services in Mozambique

	Public services	NGOs	Companies Private sector	-	Total
Nº of cities	12	7		0	12
Nº of Administrative Statio	317	180		89	317
Nº of districts	128	112		68	128
Nº of farmers assisted	432,234	346,474		193,165	971,873
Nº of extensionist	770	817		651	2,238

Source: Relatório Anual 2010 – Direção Nacional de Extensão Agrária

In the case of soybean production in Mozambique, the smallholder farmers face several constraints, such as the low level of literacy, the lack of organization, the low capability to manage machines, the lack of business management. The Brazilians introduced the soybean to the Lioma state farm in 1980s and World Vision (NGO) reintroduced it in 2002. It was the successful push of a technological package from 2004 by donor and NGOs – Clusa, TechnoServe, Gates, Norway, the United States, International Institute of Tropical Agriculture (IITA) and others – that turned it into a profitable crop (Hanlon and Smart, 2012).

### 3. Theoretical framework

This study focuses on supporting organizations that target smallholder farmers’ constraints and facilitate them being part of a production system, in other words, they facilitate the transaction between smallholder farmers and industry/trader (figure 1). We exclude the smallholder farmers that are integrated to processor’s company/trader, for

instance, the employees of the processor’s company. The supporting organizations provide technical assistance, market linkage, financial assistance, or other support for the smallholder farmers to facilitate their transaction.

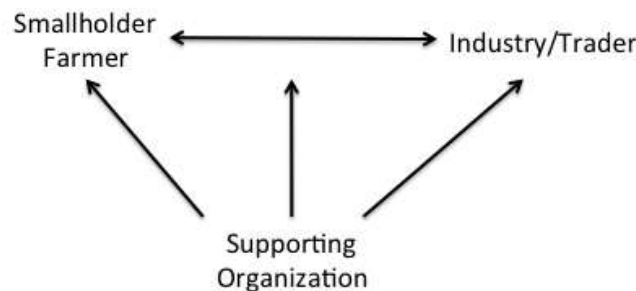


Figure 1. Organizations that facilitate the transaction between family farmer and industry

The supporting organization is part of organization environment, which includes other agents, such as educational and research institutions, financial institutions, public and private bureaus as named by Williamson (2002). These agents are important for production system operation, although they are not the agents of production system. The focus of our assessment is on the supporting organizations that are part of organization environment (figure 2). The supporting organizations can be the NGOs involved in supporting the family farmers, financial institutions, private institutions, governmental agencies, such as Center of Agriculture Promotion (CEPAGRI), Province Directorate of Agriculture, and so on.

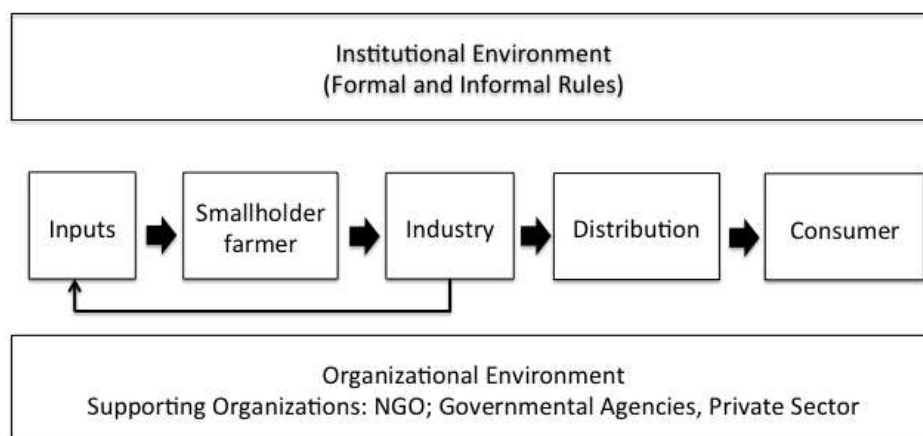


Figure 2. Agro-industrial system approach

Source: Adaptation from Zylbersztajn, 1995



Even though the supporting organizations are not part of the transaction between smallholder farmers and industry/trader, they might affect directly the transaction reducing the transaction costs. According to Arrow (1969:48) transaction costs are the “costs of running the economic system”. Insofar the supporting organizations facilitate the transaction between smallholder farmers and industry/trader, the transaction costs reduce. Hence, the costs for negotiations efforts, contracts design, coordination, and so on. For instance, the NGOs reduce the transaction costs because they have the role of coordinators and facilitators of support activities, such as the training, advice, market linkage (Penrose-Buckley, 2007). In addition, NGOs provide services that enhance the skills of the smallholder farmers. In the case of NGOs, they develop farmers associations and help them to link with the buyers, and develop their negotiating power. Although NGOs are not party to the contracts (or directly responsible for their fulfillment), they need to know the associations they are working with, and understand the problems that might arise in the relation between the association and the company.

Smallholder farmers often need additional investments and interventions in order to participate in producer organizations. NGOs can provide smallholder farmers these interventions to organize the smallholder farmers into producer organizations. Moreover, NGOs play an important mediating and facilitating role in the producer organization support process (Penrose-Buckley, 2007).

Assuming that not all models of supporting organization are complete, we intend to assess different supporting organization models, which support family farmers. There is not a single organization model that is the best and would suit all needs of smallholder farmers.

#### **4. Methodology**

The research design type used in this study is the case study based on multiple cases, which provide more insights than single case designs. The multiple case studies usually encompass different analytical narratives, moving from *sui generis* to comparative (Shirley, 2005). Yet case study designs rely less on comparing cases than on exhaustive analysis of individual cases and then on comparing cases (De Vaus, 2001). The goal of a case study design is theoretical generalization rather than statistical generalization (Yin, 1989; De Vaus,



2001). The cases were strategically selected rather than the statistical selection of cases. The strategic selection of cases contributes the replication of the theory.

This study is an exploratory research with primary data collection through semi-structured questionnaire applied in supporting organizations of two provinces of Mozambique: Manica (Chimoio) and Maputo (Maputo) (map 1). The data collection was during the period of 15<sup>th</sup> March 2012 up to 09<sup>th</sup> July 2012. The public targeted was no probabilistic and the selection was focused on supporting organizations.



Map 1. Mozambique with the Provinces (Chimoio and Maputo) visited

A starting point for our research, we selected the supporting organizations that were available to provide information and answer our questionnaire. Then, through these supporting organizations, we obtained information about others supporting organizations – snowball sampling, resulting in 39 organizations divided into 5 groups: 8 Government organizations; 15 National NGOs; 12 International NGOs; 1 Association; and 3 Private Sector organizations.

The supporting organizations interviewed are focused on different goals, such as natural resource management, land concerns, health and education issues, smallholder farmers' organization, market linkage, and energy issues. The selection of supporting organization was based on those that support smallholder farmers. Besides this criterion, we interviewed the organizations involved with biodiesel issues. The majority of supporting organization working with biodiesel issues is the government and private organizations. As the biodiesel is an incipient production system in Mozambique, we interviewed the



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organizations working with smallholder farmers in general that might serve as model for biodiesel production system.

The strategic selection of the cases were based on the question proposed for this research: “What models do supporting organizations use to support programs for smallholder farmers in linking them to food, feed, and fuels markets?” Considering that soybean can be used either to food, feed or fuel, we considered the supporting organizations that are working with smallholder farmers to develop this crop. There is not a single organization model that is the best and could suit all needs of smallholder farmers. Hence, drawing on the 39 supporting organizations interviewed we selected 5: Micaia Foundation; Agrifuturo; Clusa; IFDC; and Opportunity Bank.

Assuming that collective action is required for smallholder farmers participating into soybean production system and they are not capable to organize into producer organizations by themselves in Mozambique, we focused on the supporting organization that organize the smallholder farmers for soybean production: Micaia Foundation and Clusa.

The producer organizations improve the lives of smallholder farmers by helping them to increase their production, but if there is no market for the produce, or prices collapse because of overproduction, the benefits of producer organizations are short-lived. Then, the smallholder farmers have to adopt a market-oriented (Penrose-Buckley, 2007). In this sense, the market linkage was considered for cases selection. Either Micaia Foundation or Clusa provides the market linkage to producer organization involved into soybean crop.

The access to agro inputs is one of the smallholder farmers constrains. In Mozambique, in general, farmers must travel 30 to 40 kilometer to buy agro-inputs because agro-dealers are located in major market towns, making it difficult for smallholder farmers to access the fertilizers and improved seeds. Considering this smallholder farmer constrain, the case of IFDC was selected.

Smallholder farmers or producer organizations often need additional investments and interventions in order to participate in a production system. The NGOs that work with smallholder farmers can link them to financial institutions in order to acquire financial loans. The NGOs interviewed pointed the Opportunity Bank that is mainly directed to smallholder farmers. Then, the Opportunity Bank was selected for the assessment.

#### 4. Supporting organizations selected

Each case selected will be described as following: (a) Micaia Foundation – national NGO; (b) Agrifuturo; (c) Clusa – international NGO; (d) IFDC – international NGO; (e) Opportunity Bank – private sector.

##### (a) Micaia Foundation

Micaia Foundation is a national NGO created in Mozambique in 2008. This organization acts in Manica Province (Sussudenga, Manica, Barue, Guru, Tambara). Micaia Foundation is helping to create new community-based enterprises in food processing, organic farming, ecotourism, and natural products. In terms of agricultural projects, Micaia Foundation aims to organize smallholder farmers and link them to buyers. Firstly, this supporting organization organizes the smallholder farmers into groups or associations to develop a program of production system and market linkage.

Micaia Foundation has a project of soybean production with the same community of Agrifuturo program. The organization of smallholder farmers can be divided into 2 groups (figure 3): (1) first level: the smallholder farmers are organized in groups that facilitate the work of Micaia Foundation; (2) second level: the groups of smallholder farmers form the association and Agrifuturo (Clusa) works in this level.

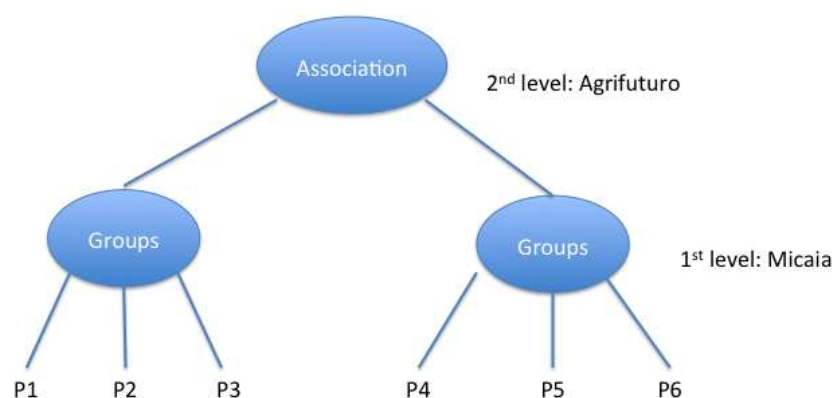


Figure 3. Groups and association of smallholder farmers



The main crops produced by smallholder farmers, besides soybeans, are: corn, peanuts, sesame, and beans. The corn and beans are for their own consumption and the product not consumed is sold to the local market.

(b) Agrifuturo

Agrifuturo is a project of USAID. On May 1, 2009, the United States Agency for International Development/Mission in Mozambique (USAID/Mozambique) awarded Abt Associates a task order to implement the Agribusiness Trade and Competitiveness (ATC) Program, later named Agrifuturo project. Agrifuturo project is a consortium with two international NGOs: Clusa and Technoserve. The former promotes the production of grains/oleaginous plants, whereas the latter promotes the production of fruits. In terms of oleaginous plants, the main crops considered are: sesame, soybean, and peanuts. While for fruits, Technoserve develops with smallholder farmers the production of banana, pineapple, and mango.

Agrifuturo project focuses on value chain development as a means of creating incentives to improve the enabling environment and expand and strengthen business development services. It will build linkages between agribusiness and financial services providers, and increase and strengthen public/private partnerships. The main objective of Agrifuturo project is to transform the smallholder farmers of subsistence into farmers with business mind to manage their activities to market.

Agrifuturo project is developed in Manica province (Gondola, Sussudenga, Manica and Barue). This project is focused on smallholder farmers in terms of their improvement that is reached through the collective action. For the collective action, the project considered the international NGO named ADCI-VOCA as partner to organize the smallholder farmers into association. After organizing the smallholder farmers into association, the next step was to transform it into a cooperative. The manager of Agrifuturo project contracted the local NGO, APCM, to work with the process of transforming the association into a cooperative. Then, the cooperative is composed of 35 associations (clubs or group of smallholder farmers) with about 35 members each association. Each group has one Production and Commercialization Agent (APC) who checks the needs of smallholder farmers to implement the Agrifuturo

project (figure 4). Then, the APC provides his members with technical information and controls the payments to each member.

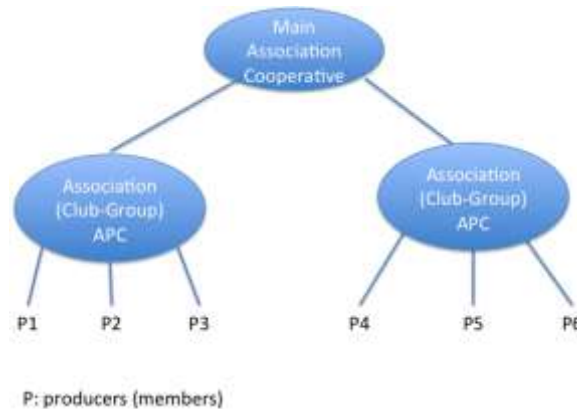


Figure 4. Associations assisted by Agrifuturo project

The smallholder farmers accumulate the production in one place to be transported to Association that supplies the buyers. The buyer pays the association for the role production. The association gives the money to the APC to pay each member according to the quantity of the production delivered.

#### (c) Clusa

Clusa (Cooperative League of the USA) is part of NCBA (National Cooperative Business Association). It is an international NGO that helps to develop cooperatives and other sustainable businesses. The mission of Clusa is to build and strengthen cooperatives and other forms of private, group-based enterprises by providing technical assistance and training. Clusa started in Mozambique in 90's, initially, in the Nacala Corridor (Nampula, Niase, and Zambeze) and afterwards started in the Beira Corridor (Manica and Tete) in 2008. The goal in Mozambique strives toward developing a solid platform for future agricultural development.

Clusa programs focus on increasing smallholder farmers' food security and income through improved farmer organization, agricultural productivity through technical assistance and training, business services, finance, and market access. In terms of smallholder farmers' organization, Clusa helps to elaborate the association statute and legalize the association. Then, the next step is to transform the association into cooperative.



One of Clusa projects is related to Agrifuturo project, which this NGO is part with oleaginous crops production. Firstly, Clusa organized the smallholder farmers into groups and the group elected their own APC (Production and Commercialization Agent). After organizing the smallholder farmers, Clusa helped to elaborate the association statute and legalize the association. As this specific Clusa project is part of Agrifuturo project, the organization of smallholder farmers into association was handled by ACDI-VOCA. Clusa develops the production of oleaginous crops through the APC and promotes the market linkage. The APC and its members have no formal contract and the transaction is based on trust. Only the members of the association receive technical assistance from Clusa, which makes the difference among non-members of association.

(d) IFDC

IFDC (International Fertilizer Development Center) is a public international organization addressing critical issues such as international food security, the alleviation of global hunger and poverty, environmental protection and the promotion of economic development and self-sufficiency. IFDC focuses on increasing productivity across the agricultural value chain in developing countries and it was established in Mozambique in 2007. IFDC project in Mozambique is the Agricultural Input Market Strengthening (AIMS) that promotes private sector investment in agro-input technologies and marketing. IFDC approaches the smallholder farmers by facilitating the access of agro-inputs through its project named Mozambique Agro-Dealer Development (MADD). MADD creates demand agro-inputs by helping farmers to access and to use modern crop production and agro-input technologies.

MADD project aims to improve farmers' access to technologies through market and dealer networks. This project also seeks to provide better access, availability and incentives to use fertilizer and other agro-inputs. The activities promoted by MADD are such as strengthening input supply chain and development of agro-dealers in rural areas and strengthening agro-dealer trade association. The former activity aims to form the agro-dealers in remote areas of Mozambique. Most of agro-dealers in Mozambique are located primarily in major market towns, making it difficult for smallholder farmers in rural areas to access fertilizers and improved seeds. The later activity is considered since associations give



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members the opportunity to pool demand, reduce costs through joint procurement, organize internal and external training sessions and advocate more effectively for a favorable policy environment.

Important activities of MADD are concerned linking agro-dealers to the market. These activities included business plan training, linkage with microfinance institutions such as Opportunity Bank, agricultural demonstrations and orientation and preparation for the new agricultural season. MADD developed marketing skills and business linkages with and through farmer associations and enhanced agro-input dealer/supplier access to commercial credit in order to achieve the most efficient supply of inputs.

(e) Opportunity Bank

Opportunity Bank was awarded a commercial banking license in March 2005 by the Central Bank of Mozambique, and it operates as a microfinance bank from August 2005. This bank is focused on microfinances to smallholder farmers and it creates feasible ways for them acquiring financial loans that are packages of inputs rather than money. In general, the supporting organization, such as NGOs, links the smallholder farmers to microcredit.

The targeted public of Opportunity Bank is the smallholder farmers associations and singular smallholder farmer. The latter must be part of a group of smallholder farmers with a number of at least 5. The reason for this requirement is due to the group is a solidary guarantee for the bank. For example, if the singular smallholder farmer does not fulfill the commitments with the Opportunity Bank, his group or association will be punished to fulfill them. Then, the reputation of smallholder farmer is considered to be part of a group or association. The requirement for the smallholder farmer having the financial loan from Opportunity Bank is only the presentation of his/her ID (identification document) without the need of offering material guarantee. Opportunity Bank adopts this strategy to differ from other financial institutions and to facilitate the smallholder farmers acquire financial loans.

Opportunity Bank offers financial loans to smallholder farmers association for two different propose: production and commercial. The former is related to the inputs for members' production. The latter is related to the commercialization of members' production. In this case, the association needs money to buy the production of its members to perform a unique sell. Then, the Opportunity Bank borrows money for the association buying the

production. The requirement for the association acquiring the financial loan is the possession of a contract with the buyer.

The process for Opportunity Bank to grant financial loans to smallholder farmers involves NGOs to organize and link them to the Bank. Firstly, the NGO organizes the smallholder farmers into groups or associations. The association has an agreement for selling products, which is the guarantee for Opportunity Bank. In terms of loan for agro-inputs (production), the Opportunity Bank supplies the agro-inputs as the loan and the association distributes it to its members. In terms of loan for commercialization, the association receives financial loan from Opportunity Bank to buy the production from its members (figure 5).

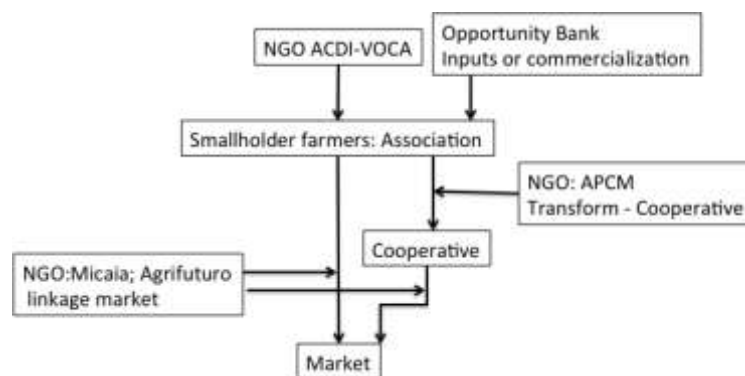


Figure 5. The loans from Opportunity Bank: inputs (production) and commercialization.

## 5. Results

The supporting organizations selected are involved with smallholder farmers to facilitate their transactions with industry/traders, consequently, reducing transaction costs. The role of NGOs is as donors, coordinators, and mainly, as facilitators of these support activities (Penrose-Buckley, 2007). In general, the organization of smallholder farmers is required in order to facilitate the implementation of supporting organization programs. Then, some supporting organization is focused on organizing the smallholder farmers into producer organizations, such as groups, association, or cooperatives. There are different actors that do business with producer organizations, such as traders, input suppliers, and banks, but their main aim is not to support the development of producer organizations as business or organizations (Penrose-Buckley, 2007). NGOs are part of organizational environment and





they often have considerable experience and expertise to offer the producer organization support.

There are different NGOs working with the same community. The reason for this is the fact that there is not a single NGO that is the best and it cannot solve all smallholder farmers constraints. Some NGOs have similar objectives and work with the same community. It was observed with Micaia Foundation and Clusa. In order to avoid overlap of activities or conflicts, these NGOs have a memorandum of their activities and agreement between them.

Both Micaia Foundation and Clusa (part of Argifuturo) organize the smallholder farmers into groups or associations. One of the reasons for organizing the smallholder farmers into producer organization, such as group, association, or cooperative is to facilitate their programs implementation and coordination of smallholder farmers. One of the main benefits of producer organizations is lower marketing cost as a result of economies of scale. The smallholder farmers organized and selling their production collectively reduce the transaction costs for both the producer and the buyers. For buyers, they can negotiate once for a large quantity rather than spending efforts negotiating with singular smallholder farmers over small quantities. On the side of smallholder farmers, they gain empowerment to negotiate better prices with the buyer and they can be part of a production system through producer organizations.

Producer organizations can reduce the production and transaction costs. Yet the producer organization have to adopt a market-oriented because, matching the production with the market. Micaia Foundation and Clusa provide the market linkage to the producer organization. Moreover, Agrifuturo project presents the Production and Commercialization Agent (APC) for each group of smallholder farmers. The APC checks the needs of smallholder farmers, provides them with technical information and controls, and controls the payment to each smallholder farmer. The APC controls his members in order to have the amount of production collected and delivered to the producer organization. Micaia Foundation and Clusa search the buyers and orient the negotiation. They have the role of intermediaries, but they are not part of the transaction and the agreements or contracts are performed between producer organization and the buyer.

The main buyer of soybean in Manica Province is Abílio Antunes. He is the main poultry farmer in Manica Province, managing a production of 300 thousands eggs per day and



20 thousand chicken per day, which demand 18 thousands tons of soybean. He pays 15 Mt/kg for less than 5 tons of soybean and the price increases to 17 Mt/kg for more than 5 tons of soybean. The producer organization gathers the soybean in an amount of at least 5 tons of soybean to receive the highest price. Then, Abílio Antunes pays the producer organization the price of 17 Mt/Kg and the producer organization pays 15 Mt/kg to its members. The difference of 2 Mt/kg should pay the transport, bags, and service of carrying and delivering the soybean. The main constraint for producer organization is to gather the soybean because of lack of resource to pay the smallholder farmers. Then, the producer organization needs to pursue the access for financial loans and the Opportunity Bank can provide it.

Micaia Foundation and Clusa link the producer organization to Opportunity Bank that is focused on micro finance to smallholder farmers. One of requirement to Opportunity Bank provides the producer organization with financial loan is the its possession of sell agreement or contract. Producer organizations, if they are legally registered, are likely to have better credibility and higher profile than individual smallholder farmers. This can facilitate the access to financial services, as Opportunity Bank is more likely to offer credit to a registered organization.

This makes it much easier for service providers to identify and work with producers and can also improve access to financial services, as rural banks are more likely to offer credit to a registered organization than to individual farmers. In Mozambique, we observed three forms of producer organizations: groups of smallholder farmers; association; and cooperatives. Groups of smallholder farmers, also named clubs, are illegal structures since they are not formally registered. While association and cooperatives have statute and are formally registered. Although some associations are not formally registered, they have the statute. Most of the producer organizations start off as informal organizations, such as group of smallholder farmers. Either formal or informal structure of producer organizations is organized with the help of supporting organization, such as NGOs, governmental extension technicians.

Firstly, the smallholder farmers are organized into groups, then into association. The next step is to transform the association into cooperative, when the association reaches a certain amount of capital. Although both association and cooperative has legal structure, there are differences between them. According to Mozambican legislation, associations should have

with non-profit objectives, and are not in a legal position to sign commercial contracts. Moreover, the association are not permitted to distribute business profits to their members, and members are personally liable for the associations' debits. In terms of cooperative, a number of smallholder farmers are reluctant to be part of a cooperative due to historical facts that cooperatives were controlled by the State. Yet with the new Cooperative Law – Law n. 23/2009, cooperatives have been created and associations transformed into cooperative (Kaarhus and Woodhouse, 2012).

A number of different NGOs and projects, such as Clusa, Agrifuturo, had been involved in the elaboration of the new Cooperative Law. This new law provides the legal framework for a new generation of farmers' organizations and it is based on a notion of cooperatives as both social and economic entities, constituted by a group of people who pursue economic, social and educational objectives through an economic enterprise. But the cooperative are created to operate in market and it can enter into operations with third parties, performing contracts. The objective of Agrifuturo project is to transform the smallholder farmers into business farmers. Then, the smallholder farmers are organized into producer organization and insofar as the association reaches the potential to continuous its business it is transformed into cooperative.

Smallholder farmers and producer organizations have the constraint to agro-inputs access because mostly of agro-dealers are located in the main market town in Mozambique. IFDC targets this constraint and facilitates the access of agro-inputs through the agro-dealers. Micaia Foundation and Clusa supply the smallholder farmers with agro-inputs that are discounted from the payment of their production. By having the agro-dealers close to the farmers, it facilitates the NGO' access to agro-inputs to supply the smallholder farmers.

## 6. Conclusion

The requirement for smallholder farmers participating in the production system is the organization of them into producer organization, such as group, association, or cooperative. The smallholder farmers in Mozambique are not capable to organize by themselves and the supporting organizations, such as government agricultural extension technicians help them to organize. Yet the Mozambican government is not able to attend all smallholder farmers' needs due to the lack of resources and the NGOs work as government partner, fulfilling

government gap. The smallholder farmers face several constraints and there is not a unique model of supporting organization that can solve all the constraints. Hence, different models NGOs and other supporting organizations work with the same smallholder farmers as partners.

The supporting organizations have activities, such as organizing the smallholder farmers into production organizations, technical assistance, agro-input access, micro-finance linkage, market linkage, and so on. These activities facilitate the participation of smallholder farmers in a production system and the transaction between them and the buyers. More than increasing the production through the collective action, a market oriented approach needs to be adopted (Burkley-Penrose, 2007). In this sense, the introduction of soybean to smallholder farmers was possible because of the internal demand for this crop. Although soybean is a specific crop and the conditions are particularly propitious, the models applied for this crop production can be replicated to other crops. Organizing the smallholder farmers into producer organizations, making the production profitable and ensuring a market, providing technology and micro credit linkage, and approaching the producer organizations to the agro-input dealers.

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