

The Role of Agricultural Credit and Microfinance

A Case of Kan Gyi Gone Village

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Abstract

An important question to microfinance is the effect of agricultural sector in rural areas. This research presents evidence from field experiments in Kan Gyi Gone village in which currently use the type of agricultural credit and microfinance. The villagers can provide their cost of living mainly based on agricultural. In village, demand and supply of microfinance are currently enough for farmers and they have strong repayment rate. The key challenge of farmers is to get water supply for cultivated crops. Some also find not having insurance program, rural non farm sector and unaware about group liability effect on loan repayment.

Key Words; Agricultural credit, Microfinance, Group lending, Rural Financial Services.

1. Introduction

Microfinance is widely seen as a key development tool to promote financial inclusion and alleviate poverty in Myanmar. While co-operatives have existed in country since the early 20th century, microfinance was first introduced to Myanmar in 1997 by UNDP's Human Development Initiative. In November 2011, the government passed the new microfinance services by allowing local and foreign investors to establish wholly privately owned MFIs in country. More than two-third of population lives in rural areas where agriculture is the main sources of employment in rural areas.

Eight priorities were agreed upon to alleviate the poverty; They are

1. The development of agricultural productivity,
2. The development of livestock breeding and fisheries,

3. The development of rural small –scale productivity,
4. The development micro saving and credit associations,
5. The development of co-operative tasks,
6. The development of rural socio- economy,
7. The development of rural energy and
8. Environmental conservation.

So, there are important the role of agricultural credit and microfinance in rural area.

1.1 Objectives of the studies

The objectives of this paper are to discuss agricultural credit and microfinance is currently used in Kan Gyi Gone village and to study the challenges of agricultural sector in village. There going to study the relationship between repayment rate and social factors.

1.2 Background of Microfinance

Microfinance is the provision of financial services to low-income clients, including consumers and the self-employed, who traditionally lack access to banking and related services. It refers to institutions that specialize in making very small loans to very poor persons in developing countries. Instead of using collateral to assure repayment, these lenders harness social pressure within the borrower's community. The provision of small loans (microcredit) to poor people to help them engages in productive activities or grows very small businesses. The term may also include a broader range of services, including credit, savings, and insurance.

Agricultural finance is defined as a subset of rural finance dedicated to financing agricultural related activities such as input supply, production, distribution, wholesale, processing and marketing. Rural financial market facilitates the economic growth and rural poverty reduction through smooth financial intermediation. Financial intermediaries help to

mobilize funds, channel them from surplus units to the deficit units, creates money, and smoothen the payment system. The efficient provision of loans, deposits, payments, and insurance service encourages rural entrepreneurship and help to rural economy to grow (World Bank, 2003). Presence of financial services helps to rural economy to grow and reduce the poverty. Access to working capital can substantially accelerate the adaptation of modern agricultural technologies and production and thereby improving the ability of the rural sector to meet the subsistence need of the poor. It also helps to produce the surplus in primary and intermediary products required for urban consumption, export, and avoid environmental degradation (World Bank, 2003).

Agriculture is widely considered more risky than industry or trade. Thus, it is not surprising that agricultural lending projects have had poor repayment performance. Weather, pests, diseases and other calamities affect the yield of crops, substantially in extreme cases.

The key feature of group lending is joint liabilities. This said that all group members are treated as being in default if any one member of group does not repay. Since group loan induce interdependence between borrowers, this independence by specifying a repayment game to represent repayment incentives. These types of scheme especially in the guise of the Grameen bank of Bangladesh. Microfinance game experiments indicate that social capital in the form of personal trust between individuals and social homogeneity within groups both have a positive effect on group performance.

During the past decade, exploring the role that social capital plays in economic behavior has emerged as one of the most fascinating and fertile areas of economic research. Although precise definitions of social capital are no to rigorously difficult to pin down, one of the early pioneers of the concept, James Coleman (1988), defines social capital as “social structure that

facilitates certain actions of actors within the structure.” In his definition, Coleman specifically highlights the roles of mutual obligation, expectations and trustworthiness, social norms, social sanctions, and the transmission of information.

2. Material and Methods

The study was conducted using primary information. Information from farmers was collected using a structured questionnaire. 64 farmers were randomly selected from Kan Gyi Gone village (26%) of total farmers. The questionnaires were filled by visiting the selected farmers in 20th June 2015. Some of the information was analyzed sample calculation.

2.1. Profile of Kan Gyi Gone Village

Kan Gyi Gone village located in Sagaing township. The east of village Min Won Hill ,west in Jei Myant Gyi lake and the north of Mandalay - Myintgyinar railway. There are about 12 miles from Sagaing city.The total population of village is about 1500.

2.2. Households and cultivated areas Conditions

There are 307 total households in Kan Gyi Gone Village. Among them 205 households are famers and the rest is daily wages households. They lived on sewing, livestock especially animals supporting agricultural. 81 % of total households are farmer household. Total cultivated areas of 64 farmer households are 1115 acres. Paddy fields areas are 13 acres, 1 % and farmland areas are 1102 acres, 99% of 64 farmer households land areas.

Table (1) Households condition

Type of Household	Number of Household	Percent
Agricultural	250	81%
Daily wages	57	19%

Sources of Survey Data 2015

Table (2) Condition of cultivated areas

Type of land	Acres	Percent
Paddy Field	13	1 %
Farmland	1102	99 %

Sources of Survey Data 2015

3. Results and Discussion

3.1 Loan Processing in Kan Gyi Gone village

Loans are accessing according to administer of village and Board of Directors of financial institution. Some loan has compulsory savings but accessing without collateral except Myanmar Agricultural Development Bank. In recent year, MADB are presented by farmers land registry as collateral. There are a bit of services charging expect EXIM and there is no credit monitoring.

3.2 Agricultural Crop and supporting factors in Kan Gyi Gone Village

Principal agricultural crops are wheat, soil Bean, Sesame, Cotton, Green gram, Maize. All of 64 farmers cultivated the same types of crops.

Table (3) Property condition of well and Tractor

Well / Tractor	Number	Percent
Well	5	8%
Tractor	8	13%

Sources of Survey Data 2015

Table (4) Property of Animals

Number of Animals	Households	Percent
0 -	2	3 %
1 - 5	28	44 %
6 - 10	27	42 %
11 - 15	4	6 %
16 - 20	3	5 %

Sources of Survey Data 2015

There are many supporting factors to agricultural sector in village. Kane Gyi Gone village are central region of country 'dry zone. Most difficulties for agricultural are to get water supply. They provide to keep water well themselves in farm, 5 households own well, that is farmers expand effort on their agricultural. Tractors own by 8 households. Many animals (Bull, Cow, Ox) own by households so it will facilitate for agricultural. Households that not have animal are two households and they hire tractor to cultivate in farm.

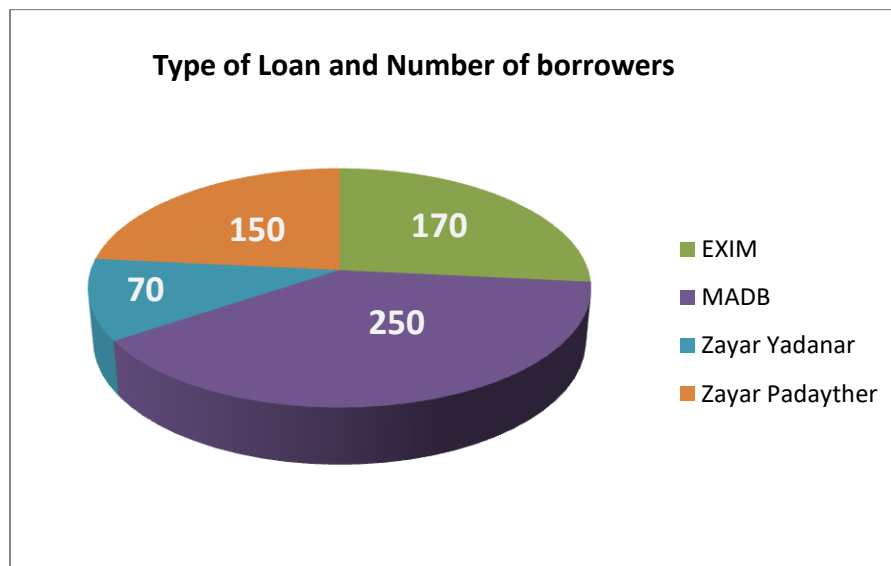
3.3 Demand and Supply of Agricultural Credit and Microfinance in Kan Gyi Gone village

Table (5) Agricultural credit and microfinance in village

Type of Loan	Loan size	Interest Rate	Loan Period	Number of borrowers	%of farmer households	Group Lending
EXIM	100000	1.5%	6 month	170	68%	5
MADB	50000-300000	0.42%	1 year	250	100%	3
Zayar Yadanar	100000	2 %	6 month	70	28%	-
Zayar Padayther	60000	2.5 %	6 month	150	60%	5

Sources of Survey Data 2015

Figure (1) Agricultural Credit and microfinance in Kan Gyi Gone village



Sources of Table (5)

There are Four kind of loan in Village EXIM, Myanmar Agricultural Development Bank, Zayar Yadanar and Zayar Padayther . EXIM loan are supervised by the Ministry of Co-operative and Sagaing's regional offices. Myanmar Agricultural Development Bank (MADB) is supervised by Ministry of Agriculture and Irrigation, Zayar Yandanar and Zayar Padayther are supervised by Microfinance Supervisory Committee, Microfinance Supervisory Enterprise in Saging Region. EXIM Bank loan size is 100000 ks, Zayar Yandanar 100000 ks and Zayar Padayther 60000 ks for each farmer. Agricultural loans represent 100% of its farmers with land registry as collateral. Loan size (20000 ks per acre of farmland and 100000 ks per acre of paddy land for up to 10 acres) are 50000 ks to 300000 ks in village. Loans are approved disbursed and repaid at the bank's branch counters which are located in Saging. Interest rate is 1.5% of EXIM, 0.42% MADB, 2 % Zayar Yadanar and 2.5 % Zayar Padayther , loan period is 6 month expect MADB a year. Number of borrower are EXIM 170 farmers (68%) , MADB 250 (100%), Zayar

Yandanar 70 farmers (28%) and Zayar Padayther 150 farmers (60%) of total farmers respectively. Lending methodology is based on 3 and 5 member of group liability.

The importance of social capital to the success of group lending, a significant tool used in the effort to provide credit to the poor in villages. Empirical work on field data that attempts to isolate the influence of social capital on group loan repayment has proven to be challenging. First, social capital and its various components are notoriously hard to measure. Moreover, groups often self-select over different components of social capital, thus making it endogenous to actual loan repayment. In Village, farmer do not select group member themselves. Group leaders are also selected by village leader. There is no contract discussion. Concepts of joint liability are also not known exactly. Only 2 farmers among 64 farmers know exactly.

3.4. Challenges facing agricultural in village

Microfinance institutions (MFIs) providing credit to farmers face a multitude of challenges. Many of these are associated with microfinance in general, such as lack of collateral and insufficient information about credit worthiness. However, all farmers are unique to agricultural lending: crop failure resulting from bad weather or pests, low yield and poor quality produce due to underinvestment in inputs. Family illness and poor health is also a problem, which is not unique to agricultural lending but may affect farming clients disproportionately due to greater reliance on family members' physical labor.

Table (6) Possibility of Default / Risk in Kan Gyi Gone Village

Possibility of Risks	Number of farmer Households	Percent
Weather	57	89 %
Pests	24	38 %
High price of inputs	12	19 %
Health family	0	0

Sources of Survey Data 2015

This studied that crop failures due to bad weather and pests are the biggest cause of possibility default, (89 %). Similarly, pest infestation poses an inherent challenge to farming (24 %). In village, pest often leads to partial or total crop failure, and affects Soil Bean, Sesame and other crops. It is difficult to detect, and often causes significant damage before pesticides can be applied. In order to reduce the risk of default due to crop failure, financial institutions may want to offer insurance to complement their loan. In this study this is partly because the insurance market for poor households is underdeveloped in the village and there is a lack of insurance products designed specifically for farmers.

Another challenge is under investment in the quantity or quality of farming inputs, such as seeds and fertilizers. The causes of this common problem include high and volatile input prices, farmers' lack of technical knowledge, and credit constraints or mismanagement of funds. This means that clients face uncertainty about their cost of production and profits from season to season, and if they are unable to save, they may have difficulty repaying loans when input prices are high. Furthermore, the prices of certain inputs are rising consistently, and farmers appear to be extremely price sensitive.

Another reason for under investment may be a lack of relevant knowledge or skill among small farmers. Farmers may be unaware of new seed varieties, fertilizers, and chemicals. Or,

farmers may be unsure of which inputs are most appropriate to local conditions or how to utilize them effectively. For instance, farmers' home-saved seeds are widely used because they are adapted to local environments, cost less, require less technical skill, and have lower maintenance requirements. Yield and quality, however, are lower than that of imported hybrid seeds or for certified seeds, with which farmers are less familiar. To get successful output from hybrid or certified seeds, farmers may require technical assistance and more inputs, such as fertilizer, pesticides, and hired labor.

Finally, even given stable prices and the knowledge and desire to use sufficient inputs, farmers may lack the capital to make the upfront investment, either due to financial constraints or inability to manage funds across the growing season. Some farmers may have difficulty managing their seasonal cash flow to purchase inputs at the right time. The study of fertilizer and pesticides usage within village brokers.

Family health affects loan repayment through three causal paths. First, since many farmers rely heavily on family members to produce their crops, it reduces the labor supply available to them and may decrease or delay their harvest or raise their cost of production if they hire workers from outside the family. Second, medical bills may strain the budgets of poor families, potentially leading to loan default or depleting emergency savings that might have been drawn on to repay loans in the case of crop failure. Finally, families may take out additional loans to cover medical or living expenses, often from money lenders at high interest rates, increasing their total debt burden. But there is no difficulty of family healthy in this village according survey data.

3.5. Agricultural income and expenditure

In production process, the average yield per acre of wheat is 9 basket, the price per basket is about 14000 ks and average unit of cultivation per acre is 20000 ks. Average yield per acre of soil bean about 5 baskets and the average price is nearly 14000 ks. Average yield per acre of sesame is about 9 baskets and average price of sesame per basket is about 34000 ks. Cotton yield per acre is about 400 viss and average price of cotton per viss is about 700 ks. Maize are cultivated a bit for forage.

Table (7) Average agriculture Income per year in Kan Gyi Gone Village

Sr.No	Income Range (ks)	No of farmer households	Percent
1	100000-5000000	26	41%
2	5000000-10000000	20	31%
3	10000000-15000000	10	16%
4	15000000-20000000	7	11%
5	20000000-25000000	1	1%

Sources of Survey Data 2015

The table show that the average agricultural income per year in village. Income range 100000 ks to 5000000 ks involve 26 households ,41 % of total farmer households, 5000000 to 10000000 ks is 20 households ,31% ,10000000 to 15000000ks is 10 households ,16 % ,15000000 to 20000000 ks is 7 households ,11 % and 20000000 to 25000000 ks is only 1 household ,1 % of total farmers households respectively. Among the five range of income, the lowest range of income are the greatest number of households and the highest range of income is only one household that own largest land size among the 64 farmer households.

Income and expenditure on agricultural is exactly difficult to calculate because of it depend on yield and price of inputs. Yields heavily depend on weather.

3.6. Loan condition on Land size

Table (8) Loan condition on land size

Land Size(Acre)	Access Borrowers	Type of loan	Access three Time of loan (exim)
1-10	26 (41 %)	4	17
11-20	19(29%)	4	13
21-30	11 (17 %)	3	11
31-40	7 (11 %)	2	3
41-50	1 (2 %)	2	1

Sources of Survey Data 2015

In above table loan situation on land size, 64 farmer's property land sizes are 1 acre to 50 acres. Farmers who own land size 1 to 10 acres are 26 farmers (41%) of farmers. Farmers who own land size 11 to 20 acres are 19 farmers (29%) of farmers. Farmer who own land size 21 to 30 acres is 11 farmers (17%), Farmer who own land size 31 to 40 acres is (11%) and Farmer who own land size 41 to 50 acres is only 1 farmer (2%) respectively. All of four type loans access by smaller land size farmers. All of farmers disbursed EXIM banks loans. All borrowers can repay for all loan.

3.7. Microfinance repayment and social factors

In most developing countries illiteracy rate is higher almost in rural areas. Poorly educated households find increasingly difficult to access the credit risks and profitability of loan and saving. On the other hand, financial institution willing to work in rural areas may lack motivated and trained staffs to work in rural areas. This lead to poor institutional capacity among rural financial institutions especially in developing countries.

In Kan Gyi Gone village, Among 64 farmer households,31 household(48%) are households that is not high school educated level. Smallest family size is alone member and largest family size is 8 household members. Most labor sources in agriculture are family member,

above 50% of family size and among 64 farmer households, 34 households (53%) have other income earning. Small dependence family members in family such as students, aged man.

There are no default rate that is 100% repayment rate. It may be loan size is small for farmers. If repayment default, there will be denied subsequent loans and size of labor force are largely among in family and having other incomes sources for almost households. Interest rate are also lower than other informal lenders.

A fundamental feature of the emerging agricultural microfinance model is that it delinks loan uses from repayment sources and, instead, treats the entire farming household as a single economic unit, with multiple income sources and multiple financing needs. Even if a loan is supposed to be used to produce a specific crop, the borrower's entire household income is considered when judging repayment capacity. Correspondingly, whatever the source, agricultural activities must be financed, and some microcredit most certainly ends up supporting traditional cropping and livestock production, directly or indirectly, by freeing up funds that would otherwise have to be saved for that purpose. By delinking loan uses and repayments, successful microlenders have far more forcefully stressed that repayments must be made regardless of the success or failure of a particular productive activity. This approach has dramatically increased repayment rates, even for loans to farming households. In village, loan are not used only in agricultural sector. Only 14 households among 64 households are used in agricultural in village.

4. Conclusions

In this paper I have reviewed the evolution of the agricultural credit and microfinance currently used in Kan Gyi Gone village and examined briefly four types of loans. These four types of loan are enough for village agricultural sector and facilitate for farmers. Key challenges facing in village that are affecting on agricultural are weather, pests and requirement to get water

supply. To reduce the crop failure, microfinance institutions should be offer crop insurance program and support irrigation system. Although group lending methodology is applied in village, farmers do not know and intensive the concept of group lending. They should be awareness about group lending. Farmer loan repayment rate are strong, 100% repayment rate. It is the effect of family's members are almost labor force/employment and a little dependence burden. Loan disbursed and repayment is only cash. There are no technical assistance, systemically use of fertilizers and pesticides and insurances. There should be rural non-farm sector backward link and forward link in villages.

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References;

1. Innovations for Poverty Action 85 Willow Street, Building B, Second Floor, New Haven, CT 06511 www.poverty-action.org in partnership with PinoyME Foundation, Benigno S. Aquino, Jr. Foundation and Hanns Seidel Foundation/Germany
2. Managing risks and designing products for agricultural microfinance Features of an emerging model
3. The Effect of Social Capital on Group Loan Repayment: Evidence from Field Experiments Alessandra Cassar *University of San Francisco*, acassar@usfca.edu Luke Crowley Bruce Wydick *University of San Francisco*, wydick@lucas.usfca.edu 200
4. Microfinance in Myanmar Sector Assessment. By Eric Duflos, Paul Luchtenburg, Li Ren, and Li Yan Chen January 2013.
5. **The Economics of Microfinance**, Beatriz Armendáriz de Aghion and Jonathan Morduch The MIT Press, Cambridge, Massachusetts London, England.