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SOURCES OF FINANCE AND LOAN UTILIZATION OF FARMERS
(A CASE STUDY OF MYAUNG MYA TOWNSHIP)

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**SOURCES OF FINANCE AND LOAN UTILIZATION OF FARMERS
(A CASE STUDY OF MYAUNG MYA TOWNSHIP)**

A thesis submitted as a partial fulfillment towards the requirements for the
Degree of Master of Banking and Finance (MBF).

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ABSTRACT

This study aims to identify sources of finance and loan utilization of farmers especially in Myaung Mya Township. This case study uses both primary and secondary data in order to fulfil the objective of the study. In the first stage, the total borrowing households are remained as 790 households within 7 villages randomly selected when the data were obtained through the use of structured questionnaire. And then in the second stage, the sample size of borrowing farmer's households is randomly selected 15% of each village. This study used both primary and secondary data in order to fulfil the objective of the study. As the primary data collection, there are 120 respondents who were face to face interviewed by using structured questionnaire. Then the secondary data was collected from the previous studies, reports and Ministry of Agriculture through interview and group discussion. In order to meet with the objectives of this study, this research uses descriptive analysis and linear regression method to explain the results. It appeared from the results that the credit for agricultural purposes was also used productivity of the paddy per acre. The seed, buying farm land, agricultural machinery, fertilizer, pesticides, herbicides, and loan coverage were assumed as the influencing factors on the farm performance to evaluate the improvement of farm productivity. To evaluate the farm performance, the paddy yield per acre was used to measure in this study. According to the analysis, in our study farm size can be an important determinant for credit demand. This situation demands for a concerted effort on the part of credit related personnel to ensure that the loanee uses credit for the exact purpose it was obtained. Therefore, agricultural credit should be provided to farmers sufficiently and timely with the several types of loans in order to increase farm performance. The value of F-test, the overall significance of the models, came out highly significant at 1% level. Moreover, the buying farm land is showing highly significant impact on credit demand at 1% level of significant on paddy yield per acre. It can be said that buying farm land more and more due to agricultural loan is greatest influence among variable on paddy yield per acre.

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LIST OF ABBRELIATIONS

FI	Financial Institution
MADB	Myanmar Agricultural Development Bank
MEB	Myanmar Economic Bank
MFTB	Myanmar Foreign Trade Bank
MIF	Microfinance
PSDC	Private Sector Development
RRBs	Regional Rural Banks
SCPL	Seasonal Crop Production Loan
SMEs	Small, Medium and Enterprise
SHG	Self Help Groups

CHAPTER 1

INTRODUCTION

Across Southeast Asia, agricultural growth has historically been a major driver of overall economic growth and poverty reduction (Christiaensen, Demery, and Kuhl 2011). Indonesia, Malaysia, Thailand and Vietnam all enjoyed rapid agricultural growth as part of their successful development over the past several decades. Given broad similarities in the economic structures of these countries in the 1970s, 1980s and 1990s in comparison with Myanmar today, the historical evidence suggests that rapid agricultural growth in Myanmar has the potential to be the engine for broad-based economic growth and poverty reduction. Moreover, the current democratic reforms in Myanmar create opportunities for development of agricultural and economic policies for greater food security and poverty reduction.

Agriculture is the backbone of the Myanmar economy: the sector accounts for about 30% of GDP, over 50% of total employment and approximately 20% of exports. Cultivated land, covering 12.8 million hectares, has the potential to be increased by nearly 50%. For decades, the agricultural productivity has faced extensive government controls and underinvestment in the sector. The government has now recognized the importance of the agricultural sector to economic development by kicking off a comprehensive reform programme in 2011.

Agricultural productivity in Myanmar is low compared with most of Southeast Asia, which partially explains the disparity in relative incomes across the countries. Raising Myanmar's productivity to the level of its agro-ecologically similar neighbors, and thereby spurring rapid agricultural growth, could significantly raise rural incomes and reduce overall poverty.

As in neighboring countries, smallholder paddy production dominates Myanmar's agricultural economy: paddy production accounts for roughly half of all cropped area. Pulses and oilseeds account for a further 20% each, whereas horticulture crops, root crops and other cereals account for the remaining part. Farmers generally grow staple crops such as paddy, pulses and oilseeds on relatively large surfaces, while high-value horticulture and fruit crops take place on much smaller plots. Paddy, pulse and oilseed farmers cultivate an average of 1.5 – 2.0 hectare (ha) per holding. In contrast, onions, garlic and potato fields

average about 0.6 hectare (ha) each, while vegetables and cut flowers are grown on plots ranging between 0.25 and 0.3 hectare (ha) in size.

Over the past decade, the Government of Myanmar has allocated nearly 0.8 million ha of land in large concessions to local agribusiness companies and, since 2010, to foreign investors. Some of the large concessions have proven commercially successful as farming businesses. Other concessionaires appear to have limited interest in farming and seem to have obtained land rights instead for speculation purposes or land rental to smallholder sharecroppers.

While increasing productivity in the rice sector would improve the livelihoods of Myanmar's numerous paddy farmers, a long-term solution must be to also introduce greater diversification in the agriculture sector and to develop value chains that offer employment opportunities for the numerous landless (Byerlee et al 2014). The potential to do so certainly exists with urbanization and rising incomes driving consumption patterns toward more high-value products which require greater processing and logistics (Reardon et al. 2012). The shared border with more developed economies and the ASEAN agreement facilitating freer trade also offer opportunities for growth in exports of high-value commodities and processed products. The challenge remains on how to support such diversification which will require large amounts of investment by government and private agro-enterprises of all sizes. Government policies likewise have an important part to play in creating an enabling environment for private sector growth.

According to Assefa (1987), the vicious circle of poverty i.e. "the low productivity, low income and again low productivity cycle", in agricultural sector can only be removed by giving credit to small farmers so that they can easily use advanced technologies and equipment, increase yield, and finally improving their ability to sell their produce in the open market for fetching good prices.

This paper aims to analyse the agricultural sources of finance and loans utilization of farmers in Myanmar up until 2018 due to providing the financial loans that can help to accelerate productivity in the agricultural sector.

1.1 Rationale of the Study

Myanmar is agro-based country and reforming its economy for moving towards all-round development. One of the economic objectives is "Building of modern industrialized nation through the agricultural development and all-round development of others sectors of the economy. Endeavour is made not only to increase domestic productivity of agricultural sector but also to gain greater share in the International Market of agricultural products.

Agriculture's role in economic development is central because most of the people in developing countries make their living from the land. Agriculture sector have:

- 1) To be more quickly win because of it most important in rural development and poverty reduction.
- 2) To increase agricultural production through raising productivity, modern agricultural technology must be utilized in the agricultural process.

By using technology method, agricultural enterprises and rural households need more working capital to buy fertilizers, quality seed and more spend in land preparing expenses. They also need long term investment for farm machineries such as pump set, power tiller.

The agricultural sector can also be a major source of capital for modern economic growth. Agriculture credit is the key element for improvement agriculture sector in many developing countries because it is important for repurchase of agricultural inputs in climate change regions and states. Credit is important and necessary for farmers because they are in need of credit for crops production as well as for farm development. (World Bank 2012)

Almost all farmers are lack of capital to modernize their farms. It is necessary to provide rural areas with sufficient capital for development. Nowadays, there are two types of credit resources: formal and informal of providing rural areas with sufficient capital of development that is to establish agricultural lands or credit cooperatives. The loan amount varies according to the number of acres owned or leased by the farmer and the intended crop and most term loans are collateralized.

Among a lot of city/townships in Myanmar, this study focus on the sources of finance and loans utilization of farmers in Myaung Mya Township that is located at Ayeyarwady Region, an important component of the economy such as rice and other crops

products in order to address credit resources, credit utilization's behaviors and performance outcomes in the study area.

1.2 Objectives of the Study

According to the above context, the present research investigation is certainly a contributing one, from the farmers' side with the following specific objectives:

- 1) To identify the sources of finance of farmers in Myaung Mya Township.
- 2) To analyze the loan utilization and its effects on farm performance in Myaung Mya Township.

1.3 Scope and Method of the Study

This study focused only on the sources of finance and loan utilization of farmers only in Myaung Mya Township. In the first stage, the total borrowing households are remained as 790 households within 7 villages randomly selected when the data were obtained through the use of structured questionnaire on August 2018. And then in the second stage, the sample size of borrowing farmer's households is randomly selected 15% of each village. This study used both primary and secondary data in order to fulfil the objective of the study. As the primary data collection, there are 120 respondents who were face to face interviewed by using structured questionnaire. Then the secondary data was collected from the previous studies, reports and Ministry of Agriculture through interview and group discussion. This research used descriptive analysis and linear regression method to explain the results.

1.4 Organization of the Study

This thesis paper consists of five chapters. Chapter (1) is introduction, including rationale, objectives, scope and method, and the organization of the study. Chapter (2) is theoretical background of the study that is described in the Contents. Chapter (3) describes the background information of Agricultural loans in Myanmar and Financial Institutions in Myaung Mya Township. Chapter (4) contains the data analysis and the explanation of the primary data from the survey of Myaung Mya Township. Chapter (5) is conclusion where findings and recommendations.

CHAPTER 2

THEORETICAL BACKGROUND

This chapter provides the literature review concerning the theories and research finding from previous studies. There is the nature of agricultural finance, role of agricultural credit, accessibility of agricultural credit and sources of agricultural finance, types of agricultural loan, previous studies and conceptual framework of the study.

2.1 Nature of Agricultural Finance

Finance in agriculture is as important as development of technologies. Technical inputs can be purchased and used by farmers only if the sufficient money (funds) is available for them. Most of the farmers suffer from the problem of inadequate financial state. This situation leads to borrowing from an easy and comfortable source (Banejee.P.K 1970).

Professional money lenders were the only source of credit to agriculture till 1995. They used to charge unduly exorbitant rates of interest and follow serious practices while giving loans and recovering them. As a result, farmers were heavily burdened with debts and many of them are left with perpetuated debts. There were widespread discontents among farmers against (Basu.S.K 1979).

With the passing of Reserve Bank of India Act 1934, District Central Cooperative Banks and Land Development Banks, agricultural credit received impetus and there were improvements in agricultural credit. A powerful alternative agency came into being through the initiative of the government. Large-scale credit was available with reasonable rates of interest at easy terms, both in terms of granting loans and recovery of them. The cooperative banks advance credit mostly to agriculture. First bank advanced short-term and medium term loans while the second bank advanced long-term loans. The Reserve Bank of India as the Central Bank of the Country took led in making credit available to agriculture through these banks by laying down suitable policies (Choubey B.N. 1983).

Agricultural Loan for purchase of seeds, fertilizers, chemicals and other inputs becomes more important as a developing country moves from traditional to more modern agriculture. Loan also helps households better manage their resources; it can be used for investment, for marketing, or for consumption. Without agricultural loan, inputs

associated with improved technologies can be purchased only by the larger, wealthier farmers. Capital formation and improvements on smaller farms are hampered. Well-functioning rural financial institutions are essential to improving economic efficiency, reducing income risk and meeting distribution goals (Basu.S.K 1979).

Agricultural loan facilitates the temporary transfer of purchasing power from one individual or organization to another. However, many types of lenders or money-markets exist and financial institutions may or may not adequately serve the needs of a developing agriculture (Basu.S. 1979).

The loan is usually required for quite different purposes by rice farmers such as consumption, social obligations, emergencies, crop loans and investments. consumption is especially during the last weeks before the harvest, families may not have any staple food available. Social Obligations are festivities for wedding, funeral, etc.... of family members. Crop loans are expenses for the current production (fertilizer, pesticides). Investments are long-term investments such as in land, wells, tractors (Choubey.B.N, 1983).

Agricultural finance needs to focus on (i) the segmenting the smallholder farmers and identifying their financial needs, (ii) finding ways to de-risk agricultural finance, (iii) identifying appropriate institutions and delivery channels for loan, (iv) and addressing issues in the enabling environment and specific government policies (World Bank, 2015).

2.2 Role of Agricultural Credit

Agricultural finance is the study of financing and liquidity services credit provides to farm borrowers. It is also considered as the study of those financial intermediaries who provide loan funds to agriculture and the financial markets in which these intermediaries obtain their loanable funds (Choubey.B.N, 1983).

Agricultural production in this country depends upon millions of small farmers. Their intensity, effort and efficiency have helped in raising yields per acre. Finance in agriculture act as a key to farmers. But farmers' money is always inadequate and he needs outside finance or credit. Because of inadequate financial resources and absence of timely credit facilities at reasonable rates, many of the farmers, are unable to go in for improved seeds and manures or to introduce better methods or techniques (Jugale, 2012).

The farming community must be kept informed about the various sources of agriculture finance. Agricultural finance possesses its usefulness to the farmers, lenders

and extension workers. The knowledge of lending institutions, their legal and regulatory environment helps in selecting the appropriate lender who can adequately provide the credit with terms and related services needed to finance the farm business (Jugale, 2012).

Agriculture plays a crucial role in the development of the Myanmar economy also. Agricultural finance is a subset of rural finance dedicated to financing agricultural related activities such as input supply, production, distribution, wholesale, processing and marketing. Financial service providers face distinct challenges when dealing with this sector. For example, the seasonal nature of production and the dependence on biological processes and natural resources leave producers subject to events beyond their control such as droughts, floods or diseases. The modern agriculture has increased the use of inputs specially for seed, fertilizers, irrigational water, machineries and implements, which has increased demand for agricultural credit. The adoption of modern technology, which is capital intensive, has commercialized agricultural production. Besides, the farmers' income is seasonal while his working expenses are spread over time. In addition, farmer's inadequate savings require the uses of more credit to meet the increasing capital requirements. Furthermore, credit is a unique resource, since it provides the opportunity to use additional inputs and capital items now and to pay for them from future earnings (Dantwala M.L, 1986).

The rural population suffers from a great deal of indebtedness and is subject to exploitation in the credit market due to high interest rates and the lack of convenient access to credit. Rural households need credit for investing in agriculture and smoothening out seasonal fluctuations in earnings. Rural households need access to financial institutions that can provide them with credit at lower rates and at reasonable terms than the traditional money-lender. Timely and adequate agricultural credit is important for the increase in fixed and working capital for farmers. In order to provide sufficient credit to the farmers, many institutional and non-institutional agencies are working. Under institutional agencies cooperative, commercial, regional rural banks and different Government organizations are supplying credit to the needy farmers on priority basis (World Bank, 2012).

2.3 Sources of Agricultural Finance

According to Kewal Kumar (1989), in order to be better in agricultural sector, the farmers need the financial support for investment. The farmers receive the credits from

the several sources i.e., The agricultural credit market consists of two broad segments. The Agricultural Credit is classified on the basis of lender such as:

- (i) Institutional Credit Source
- (ii) Non-Institutional Credit Source

(i) Institutional Credit Source

According to Kewal Kumar (1989), The evolution of institutional credit to agriculture could be broadly classified into four distinct phases - 1904-1969 (predominance of cooperatives and setting up of RBI), 1969-1975 (Nationalization of commercial banks and setting up of Regional Rural Banks (RRBs)), 1975-1990 (setting up of NABARD) and from 1991 onwards (financial sector reforms). Institutional funding of the farm sector is mainly done by commercial banks, regional rural banks and cooperative banks. Share of commercial banks in total institutional credit to agriculture is almost 48 per cent followed by cooperative banks with a share of 46 percent. Regional Rural Banks account for just about 6 percent of total credit disbursement.

Government : The government sector banks extend both short term as well as long-term loans. These loans are popularly known as "Taccavi loans" which are generally advanced in times of natural calamities. The rate of interest is low and it is not a major source of agricultural finance.

Cooperative Credit Societies : Accordingly, cooperatives received substantial help in the provision of credit as a part of loan policy and large scale assistance from Central and State Governments for their development and strengthening. Many schemes involving subsidies and concessions for the weaker sections were routed through cooperatives (Kewal Kumar - 1989).

Commercial Banks : Previously commercial banks (CBs) were confined only to urban areas serving mainly the activities of trade, commerce and industry. Their role in rural credit was meager i.e., 0.9 per cent in 1951-52 and 0.7 per cent in 1961-62. The insignificant participation of CBs in rural lending was explained by the risky nature of agriculture due to its heavy dependence on monsoon, unorganized nature and subsistence approach. Through nationalization of CBs in 1969 and CBs were made to play an active role in agricultural credit was accelerated and they are the largest source of institutional credit to agriculture.

Regional Rural Banks (RRBs) : RRBs were set up in those regions where availability of institutional credit was found to be inadequate but potential for agricultural development was very high. However, the main thrust of the RRBs is to provide loans to small and marginal farmers, landless labourers and village artisans. These loans are advanced for productive purposes.

Microfinance : Microfinance through Self Help Groups (SHG) has assumed prominence in recent years. SHG is a group of rural poor who volunteer to organize themselves into a group for eradication of poverty of the members. They agree to save regularly and convert their savings into a common fund known as the Group corpus. The members of the group agree to use this common fund and such other funds that they may receive as a group through a common management. As soon as the SHG is formed and a couple of group meetings are held, an SHG can open a Savings Bank account with the nearest Commercial or Regional Rural Bank or a Cooperative Bank. This is essential to keep the thrift and other earnings of the SHG safely and also to improve the transparency levels of SHG's transactions. Opening of SB account is the beginning of a relationship between the bank and the SHG. Once this process is over, banks liberally lend to the groups or to members and recover the loans conveniently. The banks even offer subsidy to the amount of loans borrowed based on their good response.

(ii) Non-Institutional Credit Sources

According to Kewal Kumar (1989), non-Institutional Credit sources will involve the friends or relatives, traders and commission agents, landlords, and money lenders.

Friends or Relatives : The friends and relatives of farmers provide to the farmers such as small term loans to be able to solve their financial needs/ emergency needs. They usually support the loans with or without interest.

Traders and Commission Agents : Traders and commission agents advance loans to agriculturists for productive purposes against their crop without completing legal formalities. It often becomes obligatory for farmers to buy inputs and sell outputs through them. They charge a hefty rate of interest on the loan and a commission on all the sales and purchases, making it exploitative in nature.

Landlords : Mostly small farmers and tenants depend on landlords for meeting their production and day to day financial requirements.

Money lenders : Despite rapid development happening in rural branches of different institutional credit agencies, village money lenders still dominate the scene. Money lenders are of two types, agriculturist money lenders who combine their money lending jobs with farming and professional money lenders whose sole job is money lending. Money lenders charge a huge rate of interest as they take advantage of the urgency of the situation. Over the years a need for regulation of money lending has been felt. But lack of institutional credit access to certain sections and areas have facilitated unhindered operation of money lending (Desai. R. G., 2001).

2.4 Type of Agricultural Loan

Agricultural loan can be defined as the use in advance of capital that is expected to be accumulated from future income. When the farmers borrow a part of the money needed to purchase or operate a farm, they are using capital that have been saved by someone else. For this capital, they agree to pay the lender a specified rate of interest. They agree to use it for specific purposes and to pay it back at specified date in the future. When credit is used, it should be only as a supplement to the farmer's own capital acquired through saving or inheritance.

The most important institutional instrument of the government is to promote agricultural production, productivity and raising the standard of living of the rural population. Cash and in-kind loans are provided through it to support firm and animal husbandry activities. Credit is needed to support the following function in the agricultural and food production system.

(a) Credit for the farmers to raise crops and repay after the crop is harvested and realized learned for convenience as production credit.

(b) Finance for large volumes of inputs purchased by wholesales and country-wide distributors in advance of the season to make it available to farmers at the time of planting referred to as distribution credit.

(c) Credit for retailers to purchase inputs and stock them ahead of the season; this category would also cover trading in firm needs and farmers' consumption needs categorized as redistribution credit.

(d) Finance for holding produce between harvest and periodic sale throughout the year for consumption-output credit presently dominated by public sector procurement agencies.

(e) Funding needs of agro-processing and other post-harvest economic activities-post harvest credit.

Agricultural Loans are categorized as short-term, medium-term and long-term loans depending on their maturity. Lenders often describe loans by the purpose or terms of the loan according to Eillnger and Barry (N.D).

(i) Short-term Loan

Short-term loan is the means by which many farmers obtain the use of capital for non-real estate purpose. Short-term loans that a substantial part of agricultural production is financed by farmer's own resources and it was from borrow in the informal market. Short-term credit is made available for farm expenses such as plowing, harvesting, irrigation and fuel, cost of inputs, for small tools and for animal feeds and medicines.

In respect of production loans for cereal crops, the duration between planting and harvest will not take the one-year period allowed for short-term loans. The purpose of the extra time allowed for repayment beyond the harvest is to enable farmers to store the produce and wait for remunerative prices generally not immediately following the harvest when prices are at the lowest but after a few weeks. The short-term duration in effect is limited till harvest. Farmers growing crops that are offered in the open market that can advantage by trade-off between carrying cost and the prospect of higher market price (Eillnger and Barry (N.D 2000).

(ii) Medium-term Loan

Medium-term loan for periods not exceeding three years is extended for green houses, forest tree planting, purchase of livestock, digging of canals for irrigation, equipment for poultry farms and machinery for grading, waxing and packing, Medium-term credit will be needed for rapid expansion in work animals, tools and equipment (Eillnger and Barry (N.D 2000).

(iii) Long-term Credit

Long-term Credit for periods of five years or less in aimed at financing construction of stores, land improvement, forestry projects, fruit tree planting programs and cold storages facilities. Medium and long term loans are important for increasing productivity, improving quality and value addition and raising farmers' debt capacity. But farmers find it difficult to obtain loans for machinery like harvesters and tractors. They have to depend

on credit supplier as high interest rates (John.W.Mellor; *The economics of Agricultural Development*, 2000).

2.5 Previous Studies

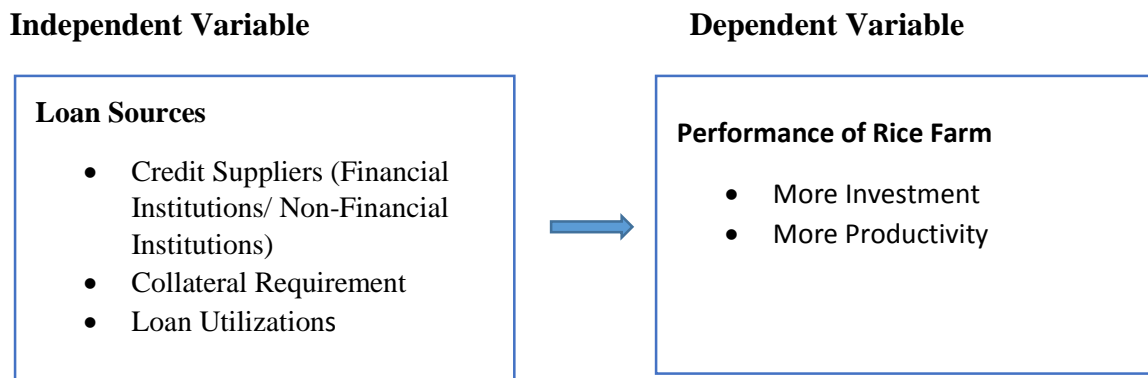
There are several studies regarding access credit of farmers. This section presents a review of some related previous studies.

In the developing world, it appeared a gigantic task to escape from the vicious circle of poverty and there is a dire need to empower the people through improving their earning capacity (Shirazi and Khan, 2009). In Pakistan, agricultural sector provides real support to the country's economy directly as well as indirectly in terms of GDP, employment and agro-based industries (Govt. of Pakistan, 2011). For backstopping this important sector, capital is the real fuel that can run this important vehicle. It not only paves the way for uplifting agricultural sector but also contributes in poverty reduction (Sial et al., 2011a) This is more critical when the farmers are the focal point. The reason is quite obvious that without making investment in this sector there is least probability of outcomes. Rising prices of inputs like seeds, fertilizers, pesticides, and machineries appeared as major dilemma of agricultural sector in Pakistan (Sial et al., 2011b). Application of modern technologies has become imperative to get maximum production. It is also a matter of fact that our farmers are facing financial constraints in the application of the agricultural technology especially agricultural inputs.

Adebayo and Adeola (2008) highlighted the importance of sources of credit and utilization by farmers in rural areas in the forms of agricultural and community banks. Institutional credits can facilitate the process of enhancing the farm productivity and thus boosting income and bettering living standards. Credit also plays an important role in the sense of food security and increasing opportunities for employment (Khan et al., 2011). However, proper policies can enhance the efficacy thereof (Rahman et al., 2011).

In Figure (2.1), agricultural loans have been used as independent variable; dependent variable which is performance of rice farm was conceptualized as pricing of the rice farm and tonnage. The loan effects their farm produce since they cannot invest in getting good rice, fertilizer as well as labor to weed their farms. In this study, accessibility of loan was operationalized in form of flexibility of loan delivery, diversification of the loans utilizations.

Figure (2.1) Conceptual Framework of Previous Study



Source: Adebayo and Adeola. Agri. Sci., Vol. 49(4), 2012

2.6 Conceptual Framework of the Study

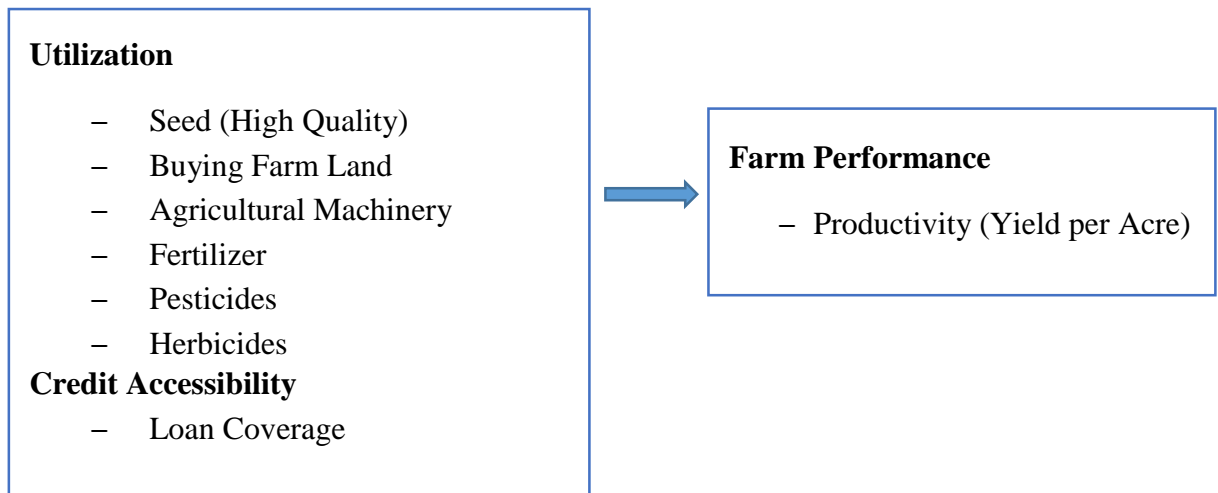
Based on the previous study, the conceptual framework for this study is constructed by the independent factors described above. As presented in the previous section, there is still need to facilitate the common farmers to access the credit facility in a comfortable manner. The access to credit can contribute towards farmers' technical efficiency. The farmers should be helped both in terms of obtaining and returning credit/loan so that they may be able to utilize it to enhance productivity (Bashir and Azeem, 2008).

Thus, it is understood that if a farmer is not in a position to put the required inputs in the field how he can expect a bumper output. There are various avenues to back up the farmers in this context including commercial banks and cooperative societies. Banks especially, is one of the main contributors to provide financial assistance in terms of credit to the. The agriculture credit system of Myanmar consists of informal and formal sources of credit supply. Therefore, the conceptual framework for this proposed study is constructed as shown in Figure (2.2).

Considering the importance of the utilization of agricultural credit by the farmers, the present study was planned and executed in one of the area of Myaung Mya Township. The study was conducted for probing the utilization of credit received by farmers in the study area.

According to the Figure (2.2), the seed, buying farm land, agricultural machinery, fertilizer, pesticides, herbicides, and loan coverage are assumed as the influencing factors on the farm performance to evaluate the improvement of farm productivity. To evaluate the farm performance, the paddy yield per acre is used to measure in this study.

Figure (2.2) Conceptual Framework of the Study



Source : Own Compilation

In order to improve the farm paddy yield per acre, it is important that the loan must be sufficient to cover the farming expenses to invest the better agricultural input. Therefore, in this analysis, to investigate the loan utilization and farm performance, the dimensions such as the loan coverage amount and agricultural inputs are used and they are specified as independent factors. All variables measured by dummy method to evaluate their effects except buying farm land. The buying farm land is measured by the farm acre.

CHAPTER 3

BACKGROUND STUDY OF AGRICULTURAL LOAN IN MYANMAR

This chapter describes overview on agricultural sector, agricultural loan, financial institutions for agricultural credit in Myanmar and also includes the background and financial institutions in Myaung Mya Township specialized.

3.1 Overview on Agriculture Sector in Myanmar

The agriculture sector is one of the most important sectors for the country's economy; agricultural goods are Myanmar's second largest export commodity. The agriculture sector contributes 38% of GDP, accounts for 20 to 30% of total export earnings and employs more than 70% of the workforce. 12.8 million hectares out of 67.6 million hectares of land in Myanmar are cultivated land. Rice is the country's primary agricultural product, which accounts for nearly 43% of the total agricultural production value. In Myanmar, 70% of the country's population live in rural areas and their livelihood drives the agriculture sector as an important growth engine of rural development. In July 2016, the Government of Myanmar officially announced a 12-point economic plan targeted at developing a market-oriented economy. The government focuses on strengthening farming production, enhancing food security, increasing exports and improving living standards of the rural population, which depends on farming as their first and key source of income.

Myanmar's rice exports are forecast to decrease by 10% in MY 2017-18 in anticipation of lower old crop supply. Myanmar's corn exports in MY 2017-18 is likely to increase 3.4% as a result of robust demand from China and an anticipated easing of border inspections along the Myanmar and China border. Wheat imports are expected to increase 13% in MY 2017-18 as a result of changing consumer preferences and resulting higher domestic demand.

Rice exports are expected to rise to 3.1 million metric tons in MY 2018-19 due to stronger demand from China and the European Union. Corn exports are also likely to expand in line with continued demand from China. Wheat imports are expected to grow in response to rising demand from the bakery sector.

Myanmar's top agricultural exports include rice, maize, black gram, green gram, pigeon pea, chick pea, sesame, onion, tamarind, raw rubber, vegetables, and fruits. Myanmar's major import items in the agricultural sector are power tillers, hand tractors, fertilizers, pesticides, herbicides, diesel oil, dumpers, loaders and spare parts, water pumps, hydraulic excavators, gear box assembly for hand tractors, hybrid and quality seeds (Myanmar Times Journal, 2017).

3.2 Agricultural Finance in Myanmar

The Government of Myanmar has affirmed its commitment to modernizing banking and finance laws and regulations, and at the same time, to developing the country's agricultural sector. To realize the objective, it will be necessary to encourage commercial banks to increase financing for agricultural enterprises. Although the Myanmar Agricultural Development Bank (MADB), credit cooperatives, and microfinance institutions (MFIs) are actively involved in rural and agricultural finance, commercial banks have been reluctant to directly finance agriculture. Current financial regulations are among the key obstacles to expanded lending to the agricultural sector by Myanmar's banks.

Providing adequate access to rural finance is a common problem in developing countries and Myanmar is no exception. Myanmar has 0.05 bank branches per 1,000 km; less than a quarter of the next lowest country regionally approximately 10% of the population is included in the formal financial sphere, which is concentrated in the urban areas, therefore, the rate of access to formal financial services in rural areas, for agriculture or otherwise, is certain to be even lower than the national average (Kloepfinger-Todd, 2013).

From 2014 to 2016, agriculture accounted for 26.3% of Myanmar's GDP, but over the same period formal bank lending to the sector amounted to only 2.5% of total lending, or about US\$295 million. Compare this figure with the US \$4.6 billion estimated potential size of the agricultural credit market in Myanmar, and a massive "lending gap" becomes obvious. These figures demonstrate both the magnitude of the problem and the significant market opportunity in agricultural credit. With a loan-to-deposit ratio of about 55%, banks have significant resources that could—under the right circumstances—be lent to primary producers and agribusinesses. Supplier financing is likely a multiple of the amount of

formal credit flowing through Myanmar's rural markets. Yet even including financing provided by input suppliers and other value chain actors, the total amount of agricultural credit is much less than what is required, especially when capital investment needs are also considered.

3.3 Financial Institutions for Agricultural Credit

In Myanmar, the agricultural credit market consists of two broad segments i.e. the institutional credit and non-institutional credit. While talking about non-institutional sources, it composes of friends, relatives and agents. Agents generally lend money for short span of time normally for six months and usually charge high rate of commission. They charge commission in two ways i.e. firstly, commission is charged on market value of total output instead of borrowed money and secondly a stipulated quantity of output is charged per acre. The loans are provided both regularly and in bad periods. These loans are provided for buying inputs and also to meet daily consumptions.

The credit providers have close relationships with farmers and are in better position to evaluate their credit worthiness and repute. The provided loans are often tied which enable farmers to enhance their credit access by repayment records. The farmers don't have to travel a lot because normally agents are in close vicinity to them. They get loan on the spot depending on their credit worthiness/relationship and how much cash is available by the arty at that time. While talking about formal sources of credit, the focus of study is on commercial banks. The commercial banks provide short, medium and long term loans. They charge comparatively low rate of interest. Since they don't know detailed information about borrowers i.e. credit worthiness and repute so they mainly rely on collateral securities. The loans are provided for buying inputs and tractors. The process is complex for sanctioning loans especially for uneducated farmers and also take more time. The banks are established bit farther which takes more time to reach.

The provision of finance in rural areas of Myanmar derives from both state and non-state sectors and is composed of formal institutions such as state-owned banks, private banks, MFIs and informal credit sources. Formal banking options include such as Myanmar Agricultural Development Bank(MADB), Mya Sein Yaung, Cooperatives private banks and microfinance. Among of them, MADB is one of the government-affiliated financial institutions (Central Bank Report of Myanmar, 2017).

The loan amounts vary according to the number of acres owned or leased by the farmer and the intended crops. Moreover, the interest rates are also different based on financial institutions. According to Proximity Design’s Annual Report (2017), the several types of interest rates, time consumption that the farmers received the loans on time or not and collateral requirements based on financial institutions as below Table (3.1).

Table (3.1) Analysis on Loan Types of Financial Institutions

Financial Institutions	Interest Rate (%)	Time Consumption	Collateral Requirement
MADB	8% p.a	On Time	Required
Private Banks	13% p.a	Not On Time	Required
MFI	6% - 18% p.a	On Time	Not Required
Other Financial Institutions	5% - 16% monthly	On Time	Not Required
Non-Financial Institutions	5% - 16% monthly	On Time	Not Required

Source : Proximity Design’s Annual Report (2017)

3.4 Background of Myaung Mya Township

Myaung Mya Township is a township of Myaungmya District in the Ayeyarwady Region of Myanmar. The main economic function is rice farming in there and most types of paddy are popular in the market.

3.4.1 Geographic Characteristics

The altitude of Myaung Mya Township is located between 16° x 35’ N Latitude and 94° x 54’ E Longitude. It is bounded by Warkema Township in the East, Laputta Township in the South, Ngaputaw and Kangyidaung Townshp in the West, and Einme Township in the North, as shown in Appendix-A. It is situated at the above sea level - 12.627' and has the wet weather between the highest temperature - 45.5°C and the lowest temperature - 8.0°C.

3.4.2 Demographic Characteristics

According to the 2014 Myanmar Census Report, it reported that Myaungmya Township had a population of 298,637 that is included 145,972 males and 152,665 females. The population density was 259 people per km. The census reported that the median age was 26.7 years, and a sex ratio of 96 males per 100 females. It has an area of 1,152.2 km². Among the population were about 12,800 Christians, mostly Karens. The district is a deltaic tract, bordering south on the sea and traversed by many tidal creeks. According to the measurement of the population and housing in Myaung Mya Township (2017), there were 64,910 households; with the 16 quarters in the 98 groups of villages in the Myaung Mya Township.

3.4.3 Economic Characteristics

It is found that agricultural, manufacturing and commerce are the main economic activities within the township. The proportion of productive working population between 15 to 64 years of age in Myaungmya Township is 64.4 percent. The proportion of children aged 14 and below together with the proportion of the elderly aged 65 and over are less than the proportion of the working age group population. Fewer proportions of children and elderly reduce the dependency of those age groups on the working age population.

About 14.3 percent of the population aged 25 and over have never been to school. Of the rural population aged 25 and over, 16.2 percent have never been to school. There are 12.3 percent of males aged 25 and over who have never attended school as against 16.1 per cent for females. Among those aged 25 and over, 26.7 per cent has completed primary school (grade 5) and only 5.1 per cent has completed university/college education.

In Myaung Mya Township, Rice cultivation and fishing occupy practically all the inhabitants of the district. Moreover, 48.4 percent of the employed persons aged 15-64 are skilled agricultural, forestry and fishery workers and is the highest proportion, followed by 20.4 percent in elementary occupations. Analysis by sex shows that 53.5 percent of males and 38.8 percent of females are skilled agricultural, and forestry workers. Their products are rice, pea, corn, mango, coconut, rubber, cashew-nut, and so on. However, the paddy is the major economic for them and usually cultivate the *Meedone*, *Eimahta*, *Latyawezin*, and *Ngasein* Crop.

Therefore, agricultural sector is an important sector of the Myaung Mya township. The main cultivate crop is paddy of which has 165, 734 farm acre in Rainy Season and 113,115 in Summer Season.

3.5 Financial Institutions in Myaung Mya Township

There are private and government banks as formal institutions such as Myanmar Agricultural Development Bank, Mya Sein Yaung, Cooperatives and Microfinance and as informal institution such as money lenders, agents, friends and relatives. Among of them, Myanmar Agricultural Development Bank(MADB) are actively involved in rural and agricultural finance, commercial banks have been reluctant to directly finance agriculture. Moreover, most of farmers are borrowed two type of their seasonal loan: monsoon and winter loan.

According to the secondary data on 2017, MADB is the main lender of agricultural credit and nearly 100% of farmers borrow from MADB to cultivate their paddy and seasonal crops. MADB loan interest rate is most affordable to farmer and receive maximum amount of loan as below Table (3.2).

Table (3.2) Types of Agricultural Loan

Item	Seasonal Loan	Loan Term Period
Purpose	Crop Production	Procurement of Farming Tool, Equipment
Loan Term	1 Year	3-4 Year
Interest Rate	8% per Year	8% per Year
Grace Period	1 Crop Season	1 Year
Loan Limit	150,000 MMK/ Acre (Max 10 Acre)	Individual Assessment by MADB
Mortgage, Guaranty	Form (7) Certificate	Real Estate (Land, Building)
Total Lending (2017)	164 Billion MMK	13 Billion MMK

Source: JICA MADB (2017)

Furthermore, the microfinance usually provides loan service to the group of villages and small business. Individual must join a group of 5 members and collectively guarantee each individual loan. The maximum loan amount is 500,000 Kyats to individual and it has interest rate – 30% per year. Loans collect installment and loan duration is only five months.

The average MADB loan duration was seven months for the monsoon season and six months for the dry season. Most monsoon loans were taken in July and repaid in March, while the majority of dry season loans were taken in October and repaid in May. There is thus a high degree of overlap between the two loan disbursement periods. The annual interest rate paid on MADB loans is 8%.

The average size of MADB loan taken by paddy farmers was MMK 490,000 whereas non-paddy farmers received a total average loan of MMK 180,000. Loans to paddy farmers and non-paddy farmers are disbursed at the rate of MMK 150,000 and MMK 20,000 per acre, respectively. However, the mean loan value obtained by paddy farmers was MMK 140,000 per acre, while that obtained by non-paddy farmers was MMK 38,000 per acre. The latter figure suggests that some households who owned paddy land were able to obtain paddy loans, but opted to grow non-paddy crops.

In the townships surveyed, MADB loans were utilized almost exclusively in monsoon season. Sixty-one percent of farm households reported having taken an MADB loan during the preceding monsoon season, as compared to just 3% in the preceding dry season. The pattern is repeated even among households producing paddy (the main crop prioritized by MADB): 74% of households who farmed monsoon paddy received an MADB loan in monsoon season, compared to just 5% of those farming dry season paddy. Rates of MADB loan access are lower among households farming non-paddy crops than those farming rice, but follow a similar seasonal trend, with 43% and 2% obtaining MADB loans in monsoon and dry seasons respectively. In monsoon season, access to MADB credit is closely correlated with size of landholding, but in dry season it is uniformly low.

Non-MADB loan duration, size and terms

The duration of non-MADB loans is similar to that of MADB loans, ranging from four to ten months on average, with a median of around six months. There is not much difference in the duration of loans taken by paddy and non-paddy farming households or by landholding.

The overall average loan value of non-MADB is MMK 300,000. The value of loans received from different sources varies between paddy and non-paddy cultivating households. Paddy farmers received larger loans than non-paddy farmers from agricultural traders, reflecting the higher input demands of the former crop, whereas the average size of loans received by non-paddy farmers from relatives/friends and informal moneylenders

exceeded those received by paddy farmers. The size of loans received from other providers, including the Department of Cooperatives, the Mya Sein Yaung fund, and microfinance institutions varied little between paddy and non-paddy farmers, indicating the advantages that borrowing from these institutions offers as compared to MADB.

Interest on most loans from non-MADB sources is calculated on a flat-rate monthly basis. As expected, the lowest average interest rates are offered by formal credit providers linked to government. Loans from the Department of Cooperatives and Mya Sein Yaung were reported to have a monthly interest rate of 1.5%. Traditional informal lenders (relatives and friends, and informal moneylenders) charged the highest rates, at 5% and 4% per month, respectively.

CHAPTER 4

ANALYSIS ON SOURCES OF FINANCE AND LOAN UTILIZATION OF FARMERS IN MYAUNG MYA TOWNSHIP

This chapter includes the analysis on sources of finance and loan utilizations of farmers as well as the effect on farm performance in Myaung Mya township. This analysis is based on the help of SPSS with the data conducted in area of Myaung Mya township. There are five main parts in this chapter such as survey design, background characteristics of respondents, sources of finance, loan utilizations and farm performance.

4.1 Research Design

This study will focus on farm loan in Myaung Mya Township in Ayeyarwady Division in order to investigate the credit utilization and its performance from both informal and formal credit sources. There are 98 group of villages who exists total population - 298,637 in Myaung Mya Township. Among them that group of villages are mostly in farming, 7 groups of villages were randomly selected from Myaung Mya township because the majority of the people in those township cultivate and produce the paddy mostly and have more farming acres. They are situated in the South part of the Myaung Mya Township which distance are far from 2 miles away from Myaung Mya Township. A total farm households are 866 households in Kone Thar, Kan Taw Myaing, Ma Yan Gone, Mya Hay Mar, Mya Kan thar, Kan Chaung, and Na Nyin Ge Villages.

In this research design, the primary data were selected by using two stage. In the first stage, 7 villages were randomly selected because that is the most farmers in the group of 96 villages. So, the total borrowing farmers' households got as 760 households and the total non-borrowing households are 76 households. Then, in the second stage, 15 % of each village of borrowing farmers' household was randomly selected as the sample size of borrowing farmers' households. Then there got 120 respondents as the borrowing household as show in Table (4.1).

Table (4.1) Sample Size of Respondents

Number of Selected Village	No of Farming House Hold	No. of Borrowing Household	No. of Non-Borrowing Household	Sample Size of Borrowing farmers Household
Kone Thar	130	120	10	18
Kan Taw Myaing	125	110	15	17
Ma Yan Gone	130	125	5	19
Mya Hay Mar	117	100	17	15
Mya Kan Thar	112	100	12	15
Kan Chaung	129	125	4	19
Na Nyin Ge	123	110	13	17
Total	866	790	76	120

Source: Survey Data (2018)

4.2 Background Characteristics of Respondents

In this section, the background characteristics of the respondents which are borrowing farmers. The characteristics of respondents are divided into two: demographic characteristics and economic characteristics.

4.2.1 Demographic Characteristics of Respondents

In Table (4.2), the variables considered were Gender, age, educational level, marital status, farm size cultivated, and loan repayment ability. The gender distribution of the respondent showed that the males dominated beneficiary arable crop farmers with about 54% as against the females with about 46%. This result is in consonance with the norm of the study area where males are expected to take control of arable crops production while the female are expected to take control of the home management.

The age distribution of the respondents showed that they were at their active and productive age with a mean of 52 years. This result was expected because age relates to physical fitness of the farmers in explaining whether or not they will be active energetic and strong enough to take part in crop production in Myaung Mya Township, agricultural practices involve manual labour with the application of physical energy which people under 20 years and those above 60 years cannot supply. This finding is consistent that small-scale farmers in Myaung Mya Township respectively were at their middle age. Age also relates to ability to attract credit. Creditors will not want to grant credit to the youths

and the aged people. The non-borrowing farmers, with the age level of 41 to 60 years are nearly half of total respondents. The age distribution of second highest non-borrowing farmers is from 21 to 40 years as 31 % of total respondents.

Table (4.2) Demographic Characteristics of Respondents

Characteristics	Loan Borrowers		Non-Loan Borrowers	
	Number	Percent	Number	Percent
Gender				
Males	65	54	44	58
Females	55	46	32	43
Total	120	100	76	100
Age (Year)				
≤ 20	20	17	6	8
21 - 40	50	42	24	31
41 - 60	40	33	34	45
> 60	10	8	12	16
Total	120	100	76	100
Educational level				
No formal education	7	6	6	8
Primary education	45	38	25	33
Secondary education	65	54	32	42
Higher education	3	2	13	17
Total	120	100	76	100
Household Size				
2-4	40	33	27	36
5-7	50	42	36	47
9-10	30	25	13	17
Total	120	100	76	100
Number of Farmers				
1	12	10	22	29
2	45	38	15	20
3	35	29	39	51
4	24	20	-	-
5	4	3	-	-
Total	120	100	76	100

Farm size (Acre)				
< 1	12	10	34	45
1 – 3	45	38	42	55
4– 6	35	29	-	-
7 – 9	24	20	-	-
≥ 10	4	3	-	-
Total	120	100	76	100
Farming Experience (Year)				
<10	8	7	5	7
10-20	34	28	11	14
21-30	57	47.5	25	33
31-40	21	17.5	35	46
Total	120	100	76	100

Source: Survey Data (2018)

The educational level of the respondents revealed that they were literate with 54 % of them having obtained formal education. The high literacy level of the respondents has implication for loan security and arable crop production. Education enabled the farmers to apply for loans, fill the necessary documents and improve their network and social contacts with the creditors. Education of the respondents also enabled them to acquire productive skills and the adoption of agricultural technology which lead to increase in output and income and for non-borrowing farmers group, 42 % are with middle education level.

Majority of the respondents (42%) of the household size are loan borrowing farmers is 5-7 family members, indicating that they were settled family persons who needed micro-credits to expand their crop farming production. This could enable them to increase their farming output and income with the resultant ability to cater for the family's needs. It could also have implication for the supply of family labour to the respondents. The respondents cultivated small-size farm holding with a mean of 1 Acre, indication that they were small-scale farmers who needed micro-credit to expand their holdings. This supports our earlier finding that the farmers needed credit to expand their arable farming production with consequent increase in their output and income.

Nearly half of borrower's farming year is within the year of 21-30. Moreover, one third of borrowing farmers are within the farming 10 to 20 years. For less than 10 years, 7 % and above 30 years is 17.5 %. For non-borrowing farmers, less than 10 years of

farming is the less percent 7% of farmer's respondents and the highest farming years, 31 to 40 has most percent 46 % of respondents.

4.2.2 Economic Characteristics of Respondents

In this section, there are two types of respondents about the economic condition. The characteristics are their annual household income, cultivated acre and yield per acre.

Annual Household Income

According to Table (4.3), the annual household income of most loan borrowing farmers is 2,500,001 to 4,500,000 kyats as over 40 % of total respondents. The smallest percent is 8 %, the annual household income from 5,500,001 to 7,200,000 kyats of the loan borrowing farmers. The non-loan borrowing farmers usually have annual household income, as the two-third (70%) that is within the amount of 1,000,000 to 2,500,000 kyats. The rest 30% of non-loan borrowing farmers has the annual household income from 2,500,001 to 4,500,000 kyats.

Table (4.3) Annual Household Income

Annual Household Income (MMK)	Loan Borrowers		Non Loan Borrowers	
	Number	Percent	Number	Percent
1,000,000 to 2,500,000	25	21	53	70
2,500,001 to 4,500,000	55	46	23	30
4,500,001 to 5,500,000	30	25	-	-
5,500,001 to 7,200,000	10	8	-	-
Total	120	100	76	100

Source: Survey Data (2018)

Cultivated Paddy Acres

The below Table (4.4) shows the acres that cultivated the paddy by the farmers. The smallest amount of loan borrowing farmers present < 1 acre and the largest is ≥ 10 acres. The smallest paddy farm size is nearly 10% and most of farmers usually cultivated the paddy between the range of 1 to 6 acres by the percentage (38%). The lowest cultivated paddy acres is equal and above 10 acres by showing 3%. Therefore, borrowing farmers is usually paddy cultivated acres so their farm performance could be increased if they get sufficient loans to utilized their needs.

Table (4.4) Cultivated Paddy Acres

Paddy Farm size (Acre)	Loan Borrowers	
	Number	Percent
< 1	12	10
1 – 3	45	38
4– 6	35	29
7 – 9	24	20
≥ 10	4	3
Total	120	100

Source: Survey Data (2018)

Paddy Yield per Acre

Paddy yield per acre of respondents are within the range between 30 to 80 bushels. Table (4.5) shows paddy yield per acre of respondents.

Table (4.5) Cultivated Paddy per Acre

Paddy Yield per Acre	Loan Borrowers	
	Number	Percent
30	3	2.5
40	5	4.2
50	12	10
60	35	29.2
70	43	35.8
80	22	18.3
Total	120	100

Source : Survey Data (2018)

It shows that paddy yield per acre of loan borrowing farmers produced within the range between 30 to 80 bushels and non- loan borrowing farmers produced within the range between 30 to 60 bushels. Majority of borrowing farmers produce 70 bushels per acre and non-borrowing farmers produce 50 bushels per acre. Therefore, this analysis founded loan borrowing farmer yield per acre more than non-borrowing farmers.

4.3 Source of Finance

This section identifies sources of finance where farmers borrow the credit based on the primary survey data on Aug 2018. The farmers usually borrow the credit from various institutions such as MADB, Cooperative, MFI, Mya Sein Yaung, Private Banks

and non-institutional sources also. According to Table (4.6), all farmers borrowed from MADB. Over 20% of farmers borrowed from the MFI, Mya Sein Young, Private Bank and other financial institutions. The 17% borrowed from the money lenders/agents of the non-financial institutions and 12 % borrowed from friend and relatives. So it found that over 10% borrowed from non-financial institutions.

Table (4.6) Sources of Finance

Sources of Finance	Number	Percent
MADB	120	100
Private Banks	30	25
MFI	28	23
Other Financial Institutions	25	21
Money Lenders/ Agents	20	17
Friends/ Relatives	14	12
Other Non-Financial Institutions	19	16

Source : Survey Data (2018)

The primary reason for taking an MADB loan was to pay for agricultural labor (reported by 51% of respondents in monsoon and 40% in dry season). Around one quarter of loans in both seasons were allocated to the purchase of agricultural inputs, while ‘general agricultural expenses’ accounted for 15% of monsoon and 18% of dry season loans.

Amount of Loan borrowed by Farmers

As described in section (3.2), MADB is the main lender of agricultural credit to cultivate their paddy and seasonal crops in Myaung Mya Township. MADB bank lends the seasonal loan at the minimum amount (150,000 MMK) per acre and the maximum amount (1,500,000 MMK) for ten acre that depend on cultivated acres. The below table (4.7) shows the loan amount received from MADB.

According to the survey data, half of borrowing farmers cultivated acres between 1 to 3 borrow 150,000 to 450,000 MMK. Second, the farmers from 4 to 6 borrow 600,000 to 900,000 MMK. At least, the farmers for 10 acres borrow nearly 7% from MADB loan.

Table (4.7) Amount of Loan received from MADB

Loan Amount (MMK)	Number	Percent
150,000 – 450,000 (1 – 3 acre)	55	45.8
600,000 – 900,000 (4 – 6 acre)	46	38.3
1,050,000 – 1,350,000 (7-9 acre)	11	9.2
1,500,000 (10 acre)	8	6.7
Total	120	100

Source : Survey Data (2018)

The other organization includes MFI, Cooperatives, Mya Sein Yaung and non-financial institution such as friends, relatives and agents. The smallest loan amount borrowed by farmers from other organization is 50,000 MMK to the maximum loan amount is 400,000 MMK. Table (4.8) shows amount of loan received from the other organizations.

Table (4.8) Amount of Loan received from Other Organizations

Loan Amount (MMK)	Number	Percent
50,000 - 100,000	5	7.5
100,001 – 150,000	10	14.9
150,001 – 200,000	8	11.9
200,001 – 250,000	20	29.9
250,001 – 300,000	15	22.4
350,001 – 400,000	9	13.4
Total	67	100

Source: Survey Data (2018)

According to survey data, there are some farmers borrowed from other organizations. Half of farmers borrow from other organizations and also MADB. Other organizations loan's interest rates are higher than MADB as shown in Table (3.1).

Loan Coverage

All farmers answered that their received loan amounts are not cover their needs in farming. The following Table (4.9) shows their loan coverage percent of respondents according to the sample size data of survey data. The most of farmer is more used the loan they received in farming. The survey data shows that half of respondents answered 50 percent that they have sufficiency. It is followed by over one-third of respondents covered 70 percent. At least, only 4.2 % of respondents answered 30 percent sufficiency.

Table (4.9) Loan Coverage

Loan Coverage Percent	Loan Borrowers	
	Number	Percent
30	5	4.2
40	7	5.8
50	58	48.3
60	20	16.7
70	30	25
Total	120	100

Source: Survey Data (2018)

Loan Types of Respondents

The importance of credit is vital in the perspective of agriculture. Under general credit scheme, the financial institutions provide short term, medium and long term credit facility to the farmers. Short term credit up to six months is to facilitate the farmers to purchase agricultural inputs such as improved seeds, fertilizers, pesticides, herbicides and small tools and for the payment to labor hired for planting and harvesting. Medium term credit for one years to three years was related to farm machinery, tube well, etc. Long term credit was for the purpose of developing buying farmland and their needs to improve farm performance.

The data collected from the respondents concerning the loan borrowed are presented in Table (4.10).

Table (4.10) Loan Types of Respondents

Loan Types	Number	Percentage
Short term	99	82.5
Medium term	14	11.7
Long term	7	5.8
Total	120	100

Source: Survey Data (2018)

The data presented in Table (4.10) clearly indicate that the big chunk of respondents (82.5%) appeared under the category of ‘short term loan’ followed by medium term loan (11.71%) and only 5.8% were getting long term loan. It may be inferred from the data that the major concern of the respondents prevailed about addressing their needs pertinent to raising seasonal crops and they need agriculture credit for seed, fertilizers and pesticides etc. to maintain the desired level inputs and found a positive relationship

between productivity and agricultural credit. They also emphasized to review interest rate and simplify the procedure of obtaining credit provided by credit suppliers. The respondents who borrowed medium and long term loan were business oriented. They also involved in buying farm land and other agricultural inputs

4.4 Loan Utilization of Respondents

Farmer access to credit and effectively utilize of loan to improve farm performance. It can be proved for improvement with higher productivity as higher paddy yield per acre by selection of quality seed for farm, adoption relevant farm technology early and effectively. By choosing quality seed, adoption farm technology effectively, farmer can manage to choose suitable rice harvesting time and selling with higher price in market. This section identifies the findings for loan utilization by the farmers based on the primary survey data (2018).

For getting insight related to various specific purposes for acquiring agricultural credit, the respondents were asked in this context and the information is depicted in Table (4.11). A conspicuous figure at nearly 93.3 % which came to scene was purchase of farm land to extend their farm productivity. The other noticeable areas over 60 % of utilization were purchased of better seed, fertilizer and pesticides. The other subsequent utilization (such as purchasing herbicides, irrigational water/cultural practices, made payment to their social activities) were with meager percentage. A small fraction of the respondents had taken the loan to buy tractor and attachments as well as modern equipment. The possibility of using the credit for exact purpose for which it was obtained or using credit partially for that purpose was also analyzed. These data based on the sample size of survey data.

Table (4.11) Loan Utilization of Respondents

Area of Utilization of Loan	Number	Percentage
Buying Farm Land (Acre)	112	93.3
Seed (High Quality)	77	64.2
Fertilizer	76	63.3
Pesticides	74	61.7
Social Activities	20	17
Herbicides	18	15.0
Culture practices/water	17	14.1
Tractor and attachments	7	5.8
Modern equipment	4	3.3

Source: Survey Data (2018)

4.5 Farm Performance

Farm performance of farmers contains paddy yield per acre, farming income for borrowing and non-borrowing farmers with the background information farmers. That includes the correlation for farm productivity between loan borrowers and non-loan borrowers and relationship between independent variables and paddy yield per acre and then regression analysis on paddy yield per acre.

Regression Analysis on Farm Productivity

In this section, the regression analysis is applied to analyze the loan utilization and its effects on farm performance in Myaung Mya Township. The dependent variable is the farm productivity measured by paddy per acre. And, the independent variables include the agricultural inputs such as seeds, buying farm land, agricultural machinery, fertilizer, pesticides, herbicides, and loan coverage to investigate the paddy yield per acre on the credit utilization. The dependent variable paddy yield per acre is explained by the independent variables (seeds, buying farm land, agricultural machinery, fertilizer, pesticides, herbicides, and loan coverage). The output from linear regression model is described in Table (4.12).

Table (4.12) Regression Analysis on Farm Productivity

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
(Constant)	44.458	1.267		35.1	.000
Buying Farm Land (Acre)	.631	.062	.372	2.738	.000
Loan Coverage	9.618	1.840	.365	5.227	.000
Seed (High Quality)	.696	.064	.340	18.103	.000
Fertilizer	.266	.052	.314	4.131	.000
Pesticides	4.677	1.684	.140	3.002	.000
Herbicides	.075	.045	.102	1.639	.003
Agricultural Machinery	4.051	1.043	.087	1.203	.003
N=120, R ² = .932, Adjusted R ² = .878, F=245.356 (p value=0.000)					

Source : Survey Data (2018)

As shown in Table (4.12), the value adjusted R² is .878 that reveals 93.2% of total variation in paddy yield per acre is explained by seven variables; seeds, buying farm land, agricultural machinery, fertilizer, pesticides, herbicides, and loan coverage. These output results suggest that the seven variables have significantly explained 93.2% of the variance

in paddy yield acre. The value of F-test, the overall significance of the models, came out highly significant at 1% level. According to this analysis, in our study the buying farm land can be an important determinant for credit demand. According to the set hypothesis buying farm land is positively correlated i.e. bigger the buying farm land, higher will be demand for credit and vice versa. The buying farm land is showing highly significant impact on credit demand at 1% level of significant on paddy yield per acre.

Furthermore, the value of standard coefficients for agricultural inputs on loan utilization .372 is highest among variables. It can be said that buying farm land more and more due to agricultural loan is greatest influence among variable on paddy yield per acre.

CHAPTER 5

CONCLUSIONS

This chapter describes conclusion of sources of finance and loan utilization of farmers in Myaung Mya Township. This chapter contains findings and recommendations and needs for further research of the study.

5.1 Findings

Myanmar is agriculture-based country. Agriculture plays an important role in reducing poverty in Myanmar. First, the agriculture activities entail various risks such as weather, plagues, and price volatility, among others. Second, around the world, there have been plenty of state-owned agriculture banks unable to fulfill their policy mandates. Many agriculture banks have become vulnerable to undue political interference in their lending decisions, causing them to generate enormous numbers of nonperforming loans. Moreover, many banks have been simply captured by their own clientele demanding subsidized loans or debt forgiveness. In various cases, state-owned agriculture banks are unable to survive without the financial support of the Government.

To meet the objectives of this study, this study found that majority of the respondents were old aged, possessed small farm holdings with very low annual income, partially repaid the crop loan, had low levels of education, plant protection equipment status, farm implements and machinery status, extension contact and medium management orientation. Since majority of the respondents were in low level with respect to most of the variables selected, efforts made to improve these attributes to higher level by creating enough infrastructure, developing resources, strengthening local bodies, existing agricultural information centers.

Majority of the respondents had completely utilized the crop loan. There is a need to encourage the respondents who had partially utilized the crop loan to utilize maximum to get best results. Financial institutions supervision needed to prevent the diversion of crop loan for personal uses by farmers.

Majority of the respondents had more improvements after getting crop loan. It is highly desirable to encourage the farmers not only to take crop loan but also apply for medium and long term loans to establish agricultural and allied enterprises, which help to

improve their conditions. The positive change in these aspects requires a comprehensive and multifaceted initiatives both by the farmers and policy makers.

This study serves as a feedback to financial institutions and agricultural department because findings indicated the effect of profile characteristics of the farmers on their extent of awareness on crop loan system, attitude and utilization of crop loan by the farmers.

According to regression analysis, seeds, farm size, agricultural machinery, fertilizer, pesticides, herbicides, and loan coverage are statistically significant with paddy yield per acre. The farm size is highest among the variable on paddy yield per acres. And, it is inferred that credit obtained for specifically agricultural purposes was also being utilized for fulfilling farmers' needs. This situation demands for a concerted effort on the part of credit related personnel to ensure that the loaner uses credit for the exact purpose it was obtained.

5.2 Recommendations

It is important that authorities transform Myanmar Agricultural Finance Sector into a stronger institution, following the sound practices adopted by successful agriculture banks that are well administered, able to withstand undue political interference, financially strong and self-sustainable, and able to fulfill their development mandate. To achieve that, several actions are recommended.

- This study was confined to crop loans within Myaung Mya Township, future studies may include other short term and long term loans being provided by institutional organizations
- A comparative study may be undertaken involving the borrowers to know about the broader impact of crop loans.
- A comparative study may be taken up between co-operatives and commercial banks how the functioning of crop loan system in both the places.

Farmers are not getting as much credit as they need even by paying very high interest rates. Thus, policy makers should ensure that the farmers get as much credit as they need at a subsidized interest rate. It will enhance their access to improved seeds, use

of fertilizer and pesticides, better irrigation facilities and mechanized methods of production which will ultimately increase the productivity of farmers.

Getting credit from banks and financial institutions has been felt difficult by most of farmers. This procedure should be simplified and made farmer friendly. Farmers in the study area have not benefited much from using the credit facility in the production of food crops and vegetables because of high interest rate charged and low productivity of agricultural sector. One reason for such low productivity is the subsistence farming practices being used by the farmers. Thus, farmers should be provided technical know-how about how to utilize credit for the enhancement of farm productivity by using better farming practices and better inputs.

5.3 Needs for Further Research

The future studies can be formulated to other personnel connected in institutional financial organizations. This study only focused on sources of finance and loan utilization of farmers in Myaung Mya Township. The study area covers Myaung Mya township only. Thus, the result for the study may not reflect the overall situation in Myanmar. Moreover, the survey was collected randomly selected farmers and villages within Myaung Mya District. Therefore, if further study can be conducted on more sample size and the whole Myanmar areas, this thesis paper would be more perfect than this one.

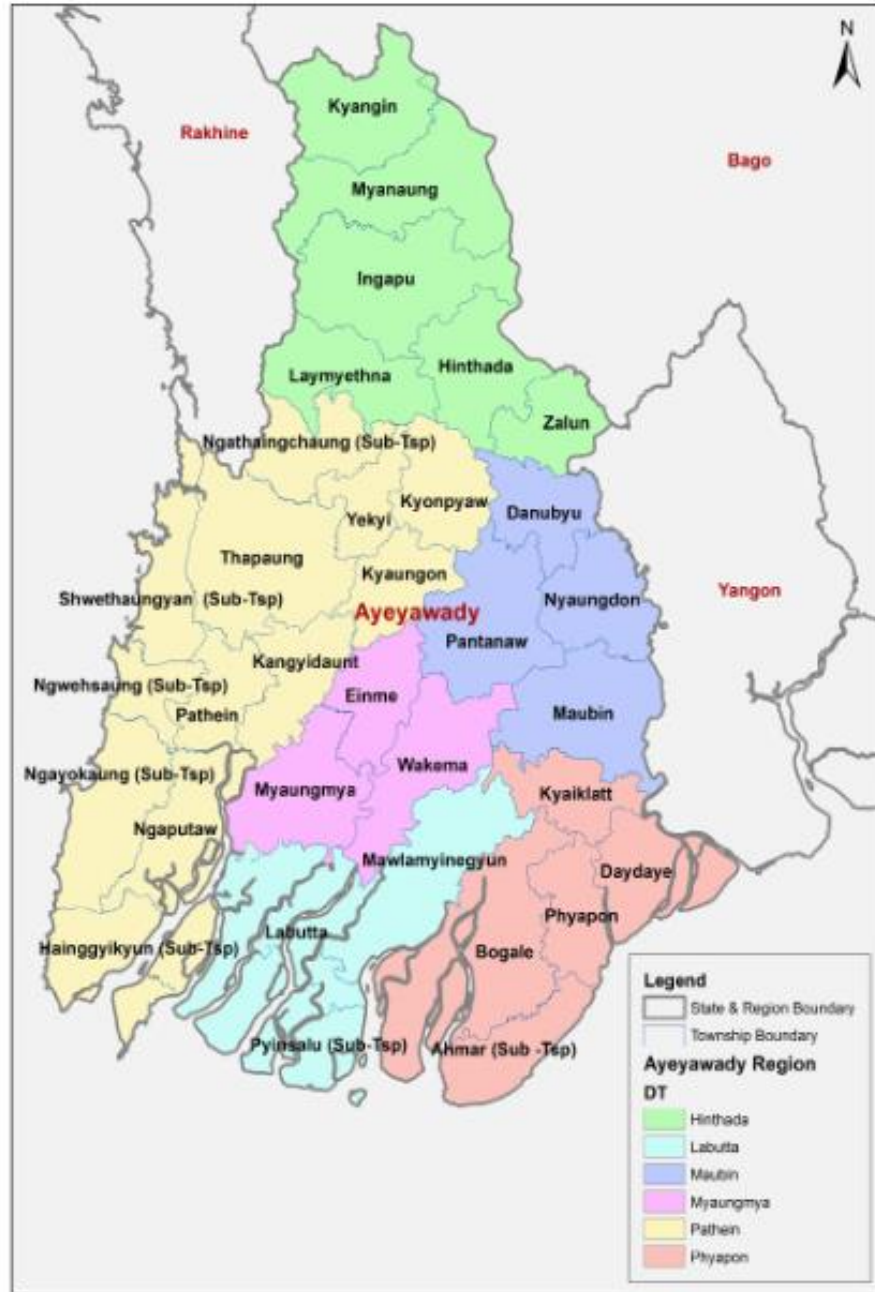
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APPENDIX - A

Myaung Mya District Map



Source: The Myanmar Population and Housing Census Report, 2014

APPENDIX - B

Questionnaires for Sources of Finance and Loan Utilization of Farmers in Myaung Mya Township

Village :	Code No :
District :	Region :
Candidate Name :	Age :
Gender :	Relationship :
	Date :

SECTION A : A HOUSEHOLD PROFILE

- 1) What is the Household Head Name?
(.....)
- 2) Gender Male Female
- 3) Age
 - < 25
 - 26 - 45
 - 46 - 65
 - 66 - 85
 -
- 4) Education
 - Primary (.....)
 - Secondary (.....)
 - High School (.....)
 - Undergraduate (.....)
 - Graduate (.....)
- 5) Family Member (.....)
- 6) Farmers (.....)
- 7) Government Employee (.....)
- 8) Goods Seller (.....)

- 9) Worker (Oversea) (.....)
- 10) House Keeper (.....)
- 11) Others (.....)
- 12) Married Status (Single Married Divorced)

SECTION B : A HOUSEHOLD FINANCIAL PROFILE

- 13) How much experience do you have in rice farming?
- < 3 years
 - 3 – 5 years
 - 6 – 10 years
 - 11 – 15 years
 - >15 years

- 14) How many acres are used for rice?
- Own Farm (.....) Acres
 - Rent Farm (.....) Acres

- 15) How many acres did you work if you are hired by the farm owners?
(.....)

16) Farm Assets

Sr.No	Items	Quantity	Description	Remark
1	Tractor			
2	Harvester			
3	Water Pump Machine			
4	Cultivator			
5	Farm Truck			
6	Cow			
7	Other			

- 17) What kind of Crops do you make in last time?
- Paddy (Rainy) Paddy (Summer) Pea Corn

18) Crop Productivity

Crop	Measurement		Productivity per Acre	Selling Price	Remark
	Tin	Viss			
Paddy (Rainy)					
Paddy (Summer)					
Pea					
Corn					
Other					

19) Agricultural Usage

Items	Quantity	Measurement	Quality		Cost per Acre
			Fair	Good	
Seeds					
Fertilizer					
Insecticide					
Wages					
Fee for borrowing the agricultural machine					
Transportation Fee					
Meal					
Other					

20) Type of Paddy

(.....)

21) How many did you get income (annually) before credit utilization?

(.....)

SECTION C : Credit Conditions

22) Sources of Credit Loan

- Institutional Loan Sources (.....)
- Non-institutional Loan Sources (.....)
- Not Applicable

23) Collateral Requirements (Yes/No)

Sources of Loan	Collateral Requirements
Formal Loan Sources	
MADB	
Private Bank/ Microfinance	
Cooperatives	
Mya Sein Yaung	
Informal Loan Sources	
Credit from Relatives	
Other Financial Sources	

24) Processing Fee Charged by Sources of Loans (Yes/No)

Sources of Loan	Documentation Fee
Formal Loan Sources	
MADB	
Private Bank/ Microfinance	
Cooperatives	
Mya Sein Yaung	
Informal Loan Sources	
Credit from Relatives	
Other Financial Sources	

25) Interest Rate on Credit Loan

Sources of Loan	Interest Rate
Formal Loan Sources	
MADB	
Private Bank/ Microfinance	
Cooperatives	
Mya Sein Yaung	
Informal Loan Sources	
Credit from Relatives	
Other Financial Sources	

26) What is payback period of loan under the followings?

Sources of Loan	Timeline
Formal Loan Sources	
MADB	<input type="checkbox"/> 6 Months <input type="checkbox"/> 1 yr <input type="checkbox"/> 2 yrs <input type="checkbox"/> 3 yrs <input type="checkbox"/> >4 yr
Private Bank/ Microfinance	<input type="checkbox"/> 6 Months <input type="checkbox"/> 1 yr <input type="checkbox"/> 2 yrs <input type="checkbox"/> 3 yrs <input type="checkbox"/> >4 yr
Cooperatives	<input type="checkbox"/> 6 Months <input type="checkbox"/> 1 yr <input type="checkbox"/> 2 yrs <input type="checkbox"/> 3 yrs <input type="checkbox"/> >4 yr
Mya Sein Yaung	<input type="checkbox"/> 6 Months <input type="checkbox"/> 1 yr <input type="checkbox"/> 2 yrs <input type="checkbox"/> 3 yrs <input type="checkbox"/> >4 yr
Informal Loan Sources	
Credit from Relatives	<input type="checkbox"/> 6 Months <input type="checkbox"/> 1 yr <input type="checkbox"/> 2 yrs <input type="checkbox"/> 3 yrs <input type="checkbox"/> >4 yr
Other Financial Sources	<input type="checkbox"/> 6 Months <input type="checkbox"/> 1 yr <input type="checkbox"/> 2 yrs <input type="checkbox"/> 3 yrs <input type="checkbox"/> >4 yr

27) How long will you need to wait to get the loan?

Sources of Loan	Timeline
Formal Loan Sources	
MADB	<input type="checkbox"/> < 1 week <input type="checkbox"/> 1 - 2 month <input type="checkbox"/> > 3 months
Private Bank/ Microfinance	<input type="checkbox"/> < 1 week <input type="checkbox"/> 1 - 2 month <input type="checkbox"/> > 3 months
Cooperatives	<input type="checkbox"/> < 1 week <input type="checkbox"/> 1 - 2 month <input type="checkbox"/> > 3 months
Mya Sein Yaung	<input type="checkbox"/> < 1 week <input type="checkbox"/> 1 - 2 month <input type="checkbox"/> > 3 months
Informal Loan Sources	
Credit from Relatives	<input type="checkbox"/> < 1 week <input type="checkbox"/> 1 - 2 month <input type="checkbox"/> > 3 months
Other Financial Sources	<input type="checkbox"/> < 1 week <input type="checkbox"/> 1 - 2 month <input type="checkbox"/> > 3 months

SECTION D : CREDIT CHOICE & USAGE

28) Do you need credit ever ?

Yes No

29) How much credit usually do you take annually?

Previous (2017)	Present (2018)

30) How much interest did you pay for these loans?

Previous (2017)	Present (2018)

31) Credit Usage

Credit Usage	Quantity	Remark
Seeds (Seasonal/Yearly)		
Fertilizers		
Insecticide		
Salary		
Agricultural Machinery Rent		
Transportation Fee		
Meal		
Social Matters		
Agricultural Technology		
Farm Land		
Other		

32) How many times do you take loan during one year?

- 1 time 2 time 3 time >4 time

33) What type of loan you prefer?

- Short Term Medium Term Long Term

34) Which source you will prefer to take loan?

- Financial Institutions Non-financial Institutions

35) Is it sufficient when those credit are used for farm?

- Yes No

36) How way do you used if loan credit is insufficient?

.....

37) Difficulties when you applied the loan

Documentation Requirement (.....)

Agent Yes No

Charges on documentation process (.....)

Payback Period (.....)

Collateral (.....)

Other (.....)

38) Loan Information Sources that you receive

Newsletter

Flyer

Radio

Friends

- Farmers
- Credit Firms

39) How many did you get income after getting credit?
 (.....)

SECTION E : CREDIT OUTCOME

1) Productivity

Description	Yes/No	Previous	Present
Seed (High Quality)			
Farm Land			
Agricultural Machinery			
Fertilizer			
Pesticides			
Herbicides			
Other Improvement			