

**YANGON UNIVERSITY OF ECONOMICS  
DEPARTMENT OF COMMERCE  
MASTER OF BANKING AND FINANCE PROGRAMME**

**EFFECT OF CREDIT ACCESSIBILITY AND  
LOAN UTILIZATION ON FARM PERFORMANCE  
(EAINME TOWNSHIP, MYAUNG MYA DISTRICT,  
AYEYARWADDY DIVISION)**

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**A thesis submitted as a partial fulfillment towards the requirements for the  
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## **ABSTRACT**

This study focuses on the effects of Credit Accessibility and find out the Loan Utilization of Farmer to start the small-scale agribusiness income generation activities in Delta, especially in rural areas. The purpose of the study was to identify the effect of credit accessibility of farmers in Eain Me Township and to analyze the Loan utilization of farmers in Eain Me Township. Data for the study was collected from both primary and secondary source by interviewing with farmers of Eain Me Township with structured questionnaires. This survey is based on 150 farmers from 5 villages in Eain Me township and interviewed to meet the main objectives. The data collection period is during a year 2018. The main finding of the study is that effect of credit accessibility has impacted high paddy yield to positively improvement in their farm performance and loan utilized to be increased capital for farm investment, hired labor and increase farmer income. Farmers applied the Sources of credit from Government bank, Financial Institution and Non- Financial institution. Thus, credit institutions should consider boosting their credit services to rural farming households in order to guarantee that more households benefit from it and sharing knowledge to farmer utilize of their loan to effectively in their farming. Effectiveness of loan utilization from affordable agricultural credit improve farm productivity and to earn more income from their farm.

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# CHAPTER 1

## INTRODUCTION

Agricultural credit plays an important role in agricultural development. Agricultural household models suggest that farm credit is not only necessitated by the limitations of self-finance, but also by uncertainty pertaining to the level of output and the time lag between inputs and output. Myanmar has historically been an agrarian society, meaning that the agriculture sector accounts for the majority of the country's economic output. The rural sector plays a pivotal role in the country's economic growth, social and political development. Agricultural and rural development can create jobs and livelihoods for small farmers and the landless, while producing food and raw materials for the urban economy. The government plans to strengthen farming production, enhance food security, increase exports and improve living standards of the rural population which depends on farming as their first and key source of income. The government is reforming the laws and policy governing the country's agriculture sector to meet the set targets under the economic plan.

Globally, there are estimated 500 million smallholder farming households – representing 2.5 billion people – relying, to varying degrees, on agricultural production for their livelihoods. The benefits of agriculture credit include the growing income of farmers, agricultural SMEs through commercialization and access to better technologies, increasing resilience through climate smart production, risk diversification and access to financial tools, and smoothing the transition of non-commercial farmers out of agriculture and facilitating the consolidation of farms. In Myanmar, 70% of the country's population live in rural areas depending on farmland and forests as their livelihoods drives agriculture sector an important growth engine of rural development. The Delta area is traditionally the location of Myanmar's named "rice bowl" but is now both economically and ecologically degraded effect of heavy blow in the form of Cyclone Nargis on May 2008.

Non- Government Organizations, International donor organization and many Sources of credit to support poor families of delta areas. Various kind of credit accessibilities are made for multiple impact of positively improvement in their agribusiness and loan utilized to be increased capital for farm investment. Generally, credit accessibility is important for improvement of quality and quantity of farm products so, that it can increase farmer's income and avoid from rural migration.

## **1.1 Rationale of Study**

The rural sector plays a pivotal role in the country's economic growth, social and political development. In Myanmar, rural sector is 64.7% and 35.3% is urban sector. Agriculture sector accounted for 36% of GDP. Poverty alleviation is one of the most important objective of developing countries. It is concluded that poor people in rural areas especially in under developing countries are in immense need of credits so microfinance programs must make available this credit needs and motivate the poor people to increase their standard of living. When it comes to rural development, with the growth of the credit infrastructure, credit flow to the poor and especially to poor women, remained near to the ground. Agricultural credit is one of the most important factors to develop rural areas in developing countries. Agricultural finance and credit are strategically important for eradicating extreme poverty and boosting shared prosperity. It is not only for financial credit but also for improving economic well-being and living standard.

The introduction of easy and cheap credit is the quickest way for boosting agricultural production. Payment of bank credit is a way of financing. In fact, facilitation of access to credit can raise amount of productive investment. Credit is not regarded as an input but rather as an engine of growth. Myanmar is agriculture country with a certain number of farmers in rural area. Financial resource is one of inputs that has basic role for other inputs and the production of agricultural products, which typically producers in providing it are faced with direct and indirect constraints. Credit has a crucial role for elimination of farmer`s financial constraints to invest in farm activities, increasing productivity and improving technologies. One of the financial institutes has an important role in financing agriculture sector is agricultural bank. This bank can direct agricultural credit flow such that helps general economic policies of government. So, duty of agricultural bank is financing of farmers and related industries and participation in activities that private sector can also invest in it. The payment of credit with low interest rate to farmers can support them against some results of development policies that threat their welfare. Therefore, with limited access to credit, the budget balance becomes a constraint, where expenditures have to remain less or equal to the sum of revenues during the period, accumulated savings and credit availability. Hence, credit constraint limits the optimum production or consumption choices.

This study examined the effect of credit accessibility and loan utilization of farmer. The chosen area for this study is farmers from Eain Me township, Ayeyarwaddy division

which area was experiencing the need of agricultural financing. Delta area's mainly crop is rice and rice is 2/3 of the cultivated area in Myanmar. This is one of the largest township in Ayeyarwaddy division and most of the people from Eain Me township are farmers.

And also, it includes one of the largest farming area township in Ayeyarwaddy Division.

## **1.2 Objectives of the Study**

The major objectives of this research are as follows;

- (1) To identify the credit accessibility on farmer
- (2) To analyze the Loan utilization of farmers in Eain Me township.

## **1.3 Scope and Method of the Study**

In this research, descriptive method is used and focuses on the agricultural credit accessibility and loan utilization of farmer in Eain Me township. Primary data were collected using proportional sampling method from 5 Villages among 97 Group of Villages, 150 farmers from 2459 households sample clients in Eain Me township, Ayeyarwaddy Township by using two stage random simple method and secondary data and information from Myanmar Agricultural Development Bank Head office and Eain Me branch. Personal interview methods also applied to collect primary data from authorized person of MADB Eain Me branch. Information gathering about credit accessibility and loan utilization was largely understand literature review on various kinds of meeting, discussing with village administrator, hundred houses group elder and Village Head Man of each village.

## **1.4 Organization of the Study**

In this study, the important of Credit accessibility is discussed in the introduction and the method of research and formation of the research are presented in Chapter 1. Theoretical Background of the Credit Accessibility in Eain Me township is presented in Chapter 2. Chapter 3 is submitted by Analyze the loan utilization of farmer in Eain Me Township. In Chapter 4, Growth and Sustainability of agricultural credit and utilization of loan to improve

the livelihoods of the farmer in Eain Me township, Ayeyawaddy Division, Myanmar. In Chapter 5 provides the conclusion, together with findings and recommendations of this paper.

## CHAPTER 2

### THEORETICAL BACKGROUND OF THE STUDY

In this chapter, it states the literature review on the sources of credit accessibility and effectiveness of agricultural credit. The study so far conducted regarding farm attributes, perceived economic return, perceived package appropriateness, use of multiple information communication methods, access to credit. However, it begins with emergence of agricultural credit and lending methodologies.

#### 2.1 Concept of Agricultural Credit

Credit is the most important thing which is required to run all the activities of life. Credit plays a critical role in the process of commercialization and modernization of agriculture sector, and especially of rural economy. Agricultural credit may be defined as the amount of investible funds made available for the farm business and farmers' family needs. In other words, Agricultural credit means money borrowed for farm investment as well as seasonal agricultural operations. Agricultural credit is the money extended to the farmers to stimulate the productivity of the limited farm resources. The agricultural productivity can only be boosted by the easy and cheap availability of credit. It is not a mere loan or advance, it is an instrument to promote the well-being of the society. The role of agricultural credit in strengthening and developing both input and output markets in agriculture is crucial and significant. It has more significance in the case of marginal and small farmers as their savings are meagre. They are in the vicious circle of poverty by providing them means to get productive assets or by providing employment opportunities. Hence, credit has a crucial role to play in raising the rural incomes (Padmanabhan, 1986).

The concept of credit in Myanmar's agriculture is not new, it existed here even before independence, but at that time most of the farmers to a great extent were depending on the credit, moreover it was rather a non-institutional form of credit. Credit was mainly provided to support farmers purchase agricultural inputs including seeds, fertilizers, cattle and implements to comfort the miserable farmers and increase the cropped area and change the cropping pattern. Myanmar agriculture is still traditional subsistence and stagnant in nature, hence credit is needed to create the supporting infrastructure for adoption of new technology. Massive investment is needed to carry out major and minor irrigation projects, rural

electrification, installation of fertilizers and chemical plants, implementation of agricultural promotion programme and poverty alleviation programme in the country.

Credit Accessibility can help farmers through the alleviation of capital constraints and thus enables farmers to make timely purchases of inputs that they cannot afford from their own resources. It has been pointed out by William G. Murray (1949) that Credit makes it possible for farmers to take advantage of new machines, good seeds, Fertilizers, livestock, labor, all of which enable the farmer to organize and operate their farm on more profitable basis. In order to adopt high yielding varieties, farmers need huge amount of loan, since their own savings are negligible. Expansion of credit institutions is a prerequisite for technological change, which will facilitate agricultural prosperity. Use of credit might have positive relationship with farmers' satisfaction. In addition, access to training can also an important factor to build farmers' knowhow as well as skill and in turn it might have positive influence.

## **2.2 Importance of Agricultural Credit**

Agriculture sector has satisfactory upheld growth to guarantee food security for the increasing population of Myanmar. Increased agricultural production and high crops yield is essential for food security which make the farming systems less vulnerable to climate change. Nevertheless, the agriculture sector faced challenges such as low returns to farmers because of high cost of inputs, fertilizers and pesticides. Credit is believed to have a significant impact on various aggregate and household-levels outcomes, including agricultural productivity, technology adoption, food security, nutrition, health and overall household welfare (Diagne & Zeller, 2001). Its ability to provide financial resources to farmers, especially for the purchase of input materials of farm. Farmers can get loan upon all of their cultivated area is the most important thing to meet their financial needs. An agriculturist has to make investment to raise the productivity of land. Sharma and Prasad (1998) studied the credit needs at different stages of technological development in agriculture. They estimated the credit requirement of farmers and impact of credit on cropping pattern income of the borrower.

Agricultural credit plays an important role in enhancing the agricultural productivity in developing countries like Myanmar. Credit is the back bone for any business, more so for agriculture which has traditionally been a nonmonetary activity for the rural population in Myanmar. Credit facilities are thus the integral part of the process of commercialization of

the rural economy. The introduction of easy and cheap credit is the quickest way to give boost to the agricultural production. Credit is an important tool for getting the inputs in time increasing thereby the productivity of the farms particularly those of small ones. The use of credit facilities would therefore translate to higher resource employment and capacity utilization, increased output and income, and reduce poverty in the rural economy, especially among the farmers and be helpful to increase the food production which would lead to an improvement in the welfare of the farmers and consequently a reduction in their poverty and food insecurity levels (Olagunju, 2007).

Credit plays an instrumental role in agriculture sector of Myanmar and also farmers are lacking technical knowhow and finances to carry out the necessary farming practices. If this issue not addressed in an appropriate way can cause problems including exploitation of poor farmers, slowdown in the adoption of modern farming techniques which will result in sluggish development of this key sector.

### **2.3 Lending Method of Agricultural Credit**

Agricultural credit is a sectorial concept that comprises financial services for agricultural production, processing, and marketing. There are plenty of potential financing opportunities in the agricultural sector. Bank and financial institution need to make to finance the agricultural sector and on the process to design and implement loan products for direct lending to farmers and agricultural SMEs (agri-SMEs) (P. Varangis, H. A. Miller, D. Chalila, H. Dellien, D. Shepherd). Direct Farmer Financing depending on risk profiles, certain farmers may be attractive clients for financing on a standalone basis. These farmers typically have relatively diversified sources of income, limited seasonality and ability to smooth cash flow throughout the year, irrigation or limited exposure to weather risks, use of good agricultural practices and strong access to markets and favorable prices. Loan size ought to be sufficient to justify individual credit assessments and other overhead costs associated with direct lending. Identifying farmers for direct financing show that farmers for whom finance is the dominant constraint usually have established wholesale or retail channels and strong relationships with a substantial number of suppliers. The best target commodity groups are those competitive farmers with good yields and growing demand for their products.

Agri-SME Financing means increasing working capital finance for agri-SMEs and it is a good entry point for directly financing farmer. The potential financing opportunities for certain farmers may be too small and /or short term to justify the costs and administration of

direct financing. In those case financing farmers via agri-SMEs in commodity value chains does not consider the credit qualifications of the farmers who ultimately receive short-term finance, but instead relies on the creditworthiness of agri-SMEs and their ability to manage their own portfolios of outstanding loans. It is not uncommon for successful agri-SME traders to be medium-sized farmers themselves, who procure from other small farmers in their vicinities to help cover operating costs of transport to markets. These types of agri-SMEs are normally good borrowers, and can be used as conduits for credit to small farmers in their procurement network. A primary caution is to assess not only their creditworthiness and management skills but also their characters to ensure business practices are acceptable. This assessment should be wary of traders that pay low prices, charge high effective rate for advances, or take large margins relative to their value addition. Identifying Agri SMEs for financing show the high performing agricultural entrepreneurs can be effective partners in increasing probability of small farmer success and loan repayment.

Agricultural credit plays a major role to push the production and raises the standard of living of rural farmers and consequently increasing economic growth and development. It has been playing a key role in catering to the needs of poor farmers. Agricultural credit plays integral role in boosting up the speed of agricultural modernization and economic development.

#### **2.4 Effectiveness of Agricultural Credit**

The development of agriculture is mainly due to the extensive use of credit. Agricultural credit is considered as an important factor in the course of modernization of agriculture. It creates and maintains adequate flow of inputs, increases efficiency in farm production and able to use modern technologies and advanced practices. Credit facilities are vital for progress of the rural and agricultural development. Agricultural credit plays a major role to push the production and raises the standard of living of rural famers and consequently increasing economic growth and development.

**Affordable Farm Financing:** Faced with limited financing and banking options, rural families are often forced to take out high interest loans from informal moneylenders, or to pawn their goods and land when they need capital. The rural population is often the last market to be served by traditional banks. Their loan sizes are small, they are difficult to reach and they often have complex income streams that ebb and flow. Most of the farmers did not have access to the capital they needed to invest in their farming business. According to

Freeman et al.(1998), farmers' access to credit is also very crucial in the scene that it can facilitate the levels of input use closer to their potential levels when capital is not a constraint. Farmers need low interest rate loans designed to meet their needs. Affordable farm financing that help farmers, migrant workers and small business owners stabilize their finances, get rid of high interest debt and launch themselves into an upward financial spiral for good. Affordable farm financing can have beneficial effects on agricultural production and rural income.

**Increase Farm Productivity:** Improved productivity of land and labor is at the cornerstone of the agricultural credit. Agricultural productivity requires the adoption of appropriate technologies and know-how to increase efficiency and sustainability of agricultural production consistently with market demand. The measures to raise agricultural productivity include those related to effective agricultural research and extension, efficient use of agricultural inputs, efficient and sustainable practices and use of natural resources (land, water, soils and forests) and increased resilience to climate change and disasters. Increase in productivity requires innovation and dissemination of knowledge and productivity enhancements will also rely on timely availability of quality inputs. Agricultural inputs and mechanization services largely carried out by the private sector and public sector providing the regulations, the enforcement, and the public goods needed for the input market to work efficiently (EkoWicaksono). The marginal contribution of credit brings input levels closer to the optimal levels, thereby increasing output and productivity (Feder et al., 1990).

**Profitability and Poverty reduction:** Agriculture credit can contribute to poverty reduction beyond a direct effect on farmer's incomes. Agricultural development can stimulate economic development outside of the agricultural sector, and lead to higher job and growth creation. It can also raise farm incomes, increases food supply, reduces food prices, and provides greater employment opportunities in both rural and urban areas. Agriculture finance is strategically important for eradicating extreme poverty and boosting shared prosperity. (Lyanda et., al, 2014) have pointed to the immense role of adoption of these technologies in enhancing productivity, poverty eradication and attainment of food security in developing countries. Credit may provide opportunity of earn more money and improve the standard of living (Vogt, 1978). Globally, there are estimated 500 million smallholder farming households in representing 2.5 billion people relying to varying degrees on agricultural production for their livelihoods. The benefits of work include the growing income of increasing resilience through climate smart production, risk diversification and access to

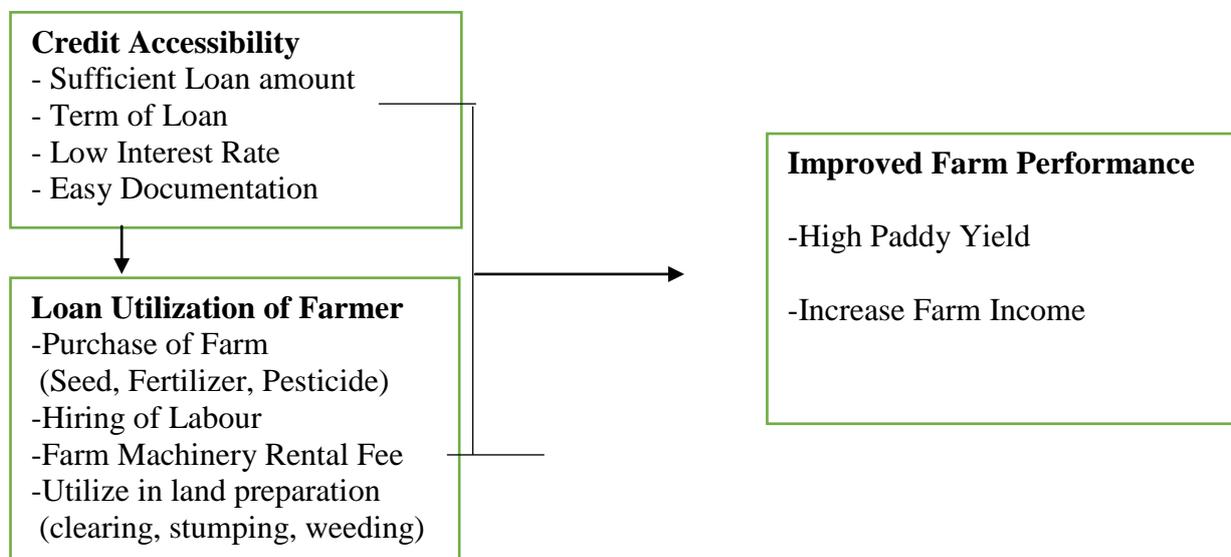
financial tools, and smoothing the transaction of non-commercial farmers out of agriculture and facilitating the consolidation of farms, assets and production.

## 2.5 Conceptual Framework

The conceptual framework shows the independent variable Access to credit which was measured in terms of Sufficient Loan amount, Loan tenor, Low interest rate loan and easy documentation procedure influence the high paddy yield and increase income of farmers.

Credit accessibility upon sufficient loan amount to use farm input such as seeds, seedling and farming materials. Loan tenor need to appropriate for farmer for their cultivation and affordable interest rate also important for their credit accessibility. Loan utilization of farmer upon their credit to use farm input such as fertilizer, seeds, insecticide and hiring labor so that they save their own fund to use farm input cost and they can use to buy farm equipment and purchase new farm land. The benefit from loan utilization is profitability and productivity of farming as high paddy yield from seed selection, adoption relevant farming methods, choosing suitable rice harvesting time and reduce residue and quality deterioration. Other benefit of increase income from crop rotation, utilization of quality input, plant early and effectively, selling paddy in market with higher price.

**Figure (2.1) Conceptual Framework**



Source: own combination

# **CHAPTER 3**

## **OVERVIEW ON AGRICULTURAL CREDIT IN**

### **EAIN ME TOWNSHIP**

This chapter presents brief description of the study area. Knowledge of the study area is essential to have first-hand information about background information, branches location and type of loan which would help later on.

#### **3.1 Role of Agricultural Finance in Myanmar**

The Union of Myanmar is an agricultural country, and agriculture sector is the backbone of its economy. Its economy has traditionally been based on agriculture. Agriculture is central to economic growth and development of Myanmar. Agriculture sector is the basic one in the national economy of Myanmar, 75% of total populations residing in rural area and basically engaged in agriculture and animal husbandry for their earning. Recently, agriculture sector contributes 36% of GDP, 35% of total export earnings and employs 63% of the labor force. And the progressive achievement in agriculture sector such as production, services and trade, are being shared to national development. The credit requirement of farmers in Myanmar is increased over time, mainly due to technological advancement and the high use of fertilizers and pesticides. Rural and agricultural finance in Myanmar at this time in its development represent many profound challenges but also a great opportunity. By using a comprehensive instead of a piecemeal approach and learning from the experiences in other countries Myanmar might well be able to shorten the time it takes to develop an efficient rural finance system.

Myanmar's financial sector and banking system are small and quite underdeveloped. It is estimated that only about 10% of the population have access to formal financial services, with a much lower ratio in rural areas. There are four state-owned banks, seven semi-government bank and local government-owned banks and twelve private banks, some of them quite recently created at the request of Government. There are quite number of institutions providing microfinance in Myanmar. Most of them are small and of the NGO-type and were created and are supported by donors. The larger ones, especially the UNDP-initiated and supported PACT, do have the potential to develop into significant sustainable, possibly even nation- wide institutions. There will also be several new entrants into the

microfinance field. The German Savings Bank Foundation is working with CARD and local partners to open two microfinance banks. IFC is supporting Aceda Bank of Cambodia in opening a microfinance bank in Myanmar. There will also be several green-field microfinance institutions sponsored by LIFT.

Myanmar's formal rural financial sector is even less developed than the financial sector in general, and access to agricultural production credit from formal sources is nearly non-existent. Large trading companies and processors report having access to some credit through bank branches of commercial banks in Township centers. However, formal credit is not sufficiently available to almost any farmer, let alone smallholder farmers. While the agricultural sector in Myanmar represents 43% of GDP and employs 54% of the population, only about 2.5% of all outstanding loans are made to this sector.

The Myanmar Agriculture Development Bank (MADB) is the only major financial institution that operates in rural space for agriculture credit. MADB is the second largest financial institution in Myanmar by branches (205) and the largest by assets and loans. Its maximum credit amount for paddy production is 150000 kyats per acres and is limited to ten acres per farmer. It covers about 25- 50% of the overall financing needs per acre at a rate of 8% p.a. The balance is primarily financed through informal loans carrying an interest rate between 5 to 10% per month. In Myanmar, most of the farmer are usually borrow from MADB and MADB is main Lender of agricultural credit to farmer in Myanmar. The MADB is state owned and the successor to the State Agricultural Bank (SAB) established in 1953, which latterly became the Myanmar Agricultural Development bank in 1976. It has a countrywide network of 14 regional offices, 169 branches and 44 agency offices with 3357 staff providing short term and long terms credit to over two million farmers. MADB lend agricultural credit to farmers total Kyats 1,658,861.75 million in 2017-2018.

Government Bank loan asked to provide collateral as Form 7 and Small and marginal farmer couldn't provide this collateral due to be difficulty to get from related authority. MADB's loan disburse to farmer for one hundred fifty thousand per acres and maximum acres is ten acres for each farmer and farmers cannot get loan for their actual need on their actual own acres so that they couldn't buy sufficient input for farms which over ten acres. Loan amount one hundred fifty thousand for one acre is not sufficient for high cost of farm input such as seeds, fertilizer, labor charges, fuel and pesticides. Government loan need to repay as per repayment schedule which is after harvesting of their crops and farmers have no chance to wait getting the ceiling price of their farm output. Other institutional loan from micro finance farms usually collect the interest two

times per month or monthly. Farmers have no sources of fund for their interest during cultivated season. Informal sources of loan from friends, relatives, village shopkeepers, traders, commission agents collect high interest rate from farmers. However most of the farmers are rely on such loan due to lack facility of access to adequate formal credit.

### **3.2 Background Information of Eain Me Township**

Eain Me Township is located in Myaung Mya District, Ayeyarwaddy Division. It is one of the economic development township of the Delta Area and people who lived in Eain Me township is mainly doing agri business and farming. Transportation system is developed in Eain Me township and usually use by road and water way. The main product of Eain Me township is Paddy and which distribute to whole country. Eain Me township is include top 10 list of highly developed system of agriculture area in delta area zone due to many cultivated area and high rate of rice production.

#### **3.2.1 Geographic Characteristics**

The Altitude of Eain Me township is 14.8 feet and it is between North latitude 16 degree 33 minutes and 16 degree 58 minutes, East longitude 94 degree 57 minutes and 95 degree 15 minutes. It is 286.67 square mile area and bounded on Pan Ta Naw township, Myanung Mya township, War Khae Ma township, Kan Gyi Daung township and Kyaung Kone Township. It has temperate climate zone and between (20°C and 37°C).

#### **3.2.2 Demographic Characteristics**

Total population is 194,101 and population of males is 48.8%, population of females is 51.2%. The majority of the people in the township live in rural areas with only 7.0% living in urban areas and population density of Eain Me township is 261 persons per square kilometer. There are 4.1 persons living in each household in Eain Me township all data gathered by Population figures for Eain Me township is as of March 2014 (Settlement and Land Record Department, Ministry of Agriculture, Livestock and Irrigation 2014-2015). There are 97 villages group and 46,455 private households, it includes Elderly population is 5.3% and Economically productive population is 54.0% and rest of 30.7% are children.

### **3.2.3 Economic Characteristics**

The main output product of Eain Me township is paddy and cultivated crops for long term are sunflower, bean, sugar cane, coconut, palm, nipa palm, mango, lime, lemon, plum and tamarind. Marketable cultivated crops are peanut, corn, turmeric, taro, chili, pepper, banana, pineapple and sweet potato and some farmers are gardening in cold season.

In Eain Me township, there are total farm land 141,992 acres and it include farm 131,246 acres and gardening 10746 acres. Cultivated for paddy is 143,010 acres in rainy season and planning to cultivate 70,880 acres in cold season. The output of the paddy 86.85 per acre and total output of the paddy is 210,504 Tin and it is sufficient to total consumption of people who lived in Eain Me township. There are a few of livestock such as pig farming, dairy farming and aqua farming business in Eain Me township. Rice mill is main business of Eain Me township and it has 28 rice mills and operated by 417 people. Other popular business is supply of agricultural inputs product such as fertilizer, pesticide, quality seeds and farm equipment. Eain Me township is free from Nargis Cyclone, the success of rice production depends on the fair climate and rich soil farm land so that Eain Me township is economic develop township in Ayeyarwaddy division.

### **3.3 Financial Institutions in Eain Me Township**

Credit disbursement to farmers in Myanmar has two main objectives, first, to reduce poverty and second to enhance food security, this policy is consistent with other developing countries of the region. In this regard Myanma Agricultural Development Bank is authorized by government to advance credit to farmers at lower interest rates through different organization. However, most of the studies show that majority of the farmers, more than 90 percent get their credit from informal sector. There are basically two types of agricultural Loans for farmers these are non-institutional and institutional sources of credit.

In Eain Me Township, MADB is the main lender of agricultural credit and 100 % of farmer 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. The farmers of Eain Me township got the loan Kyats 14,388.09 million from MADB in 2017-2018. MADB lend to farmer two times in a year which are May and November to cultivate the rainy crops and winter crops.

The following data are Agricultural credit and Paddy Yield of Eain Me township by MADB.

**Table (3.1) Agricultural Credit to Paddy Yield**

Year	Rainy Season (Kyats in Million)	Cold Season (Kyats in Million)	Paddy Yield (Acres)
2016	14,425.90	500.00	99505
2017	13,868.40	519.69	95921
2018	13,155.00		87700

Source: MADB Eain Me Branch, October 2018

According to Table 3.2, MADB's Loan volume decline 1.27% between 2016 and 2018 due to default of loan repayment. MADB can disburse loan to farmer who success to repay the previous loan. In Eain Me township, total cultivated area is 213890 acres in 2017-2018 and MADB can lend total 183621 acres in 2017-2018 (not including winter cultivated area of 2018). Farmers cannot get full acres of loan and MADB restricted to loan maximum limit 1,500,000 Kyats for maximum 10 Acres of each farmer. So that the rest areas are cultivated for seasonal crop and some are loan limit over acres for farmer who are not apply for loan.

Mya Sein Yaung is also one affordable source of loan and they provide low interest rate loan to farmer. All farmer cannot apply to this loan due to their internal policy. Other MFI provide agricultural credit to farmer with fair interest rate and there are a lot of micro finance institutions in Eain Me Township. Farmer didn't apply to micro finance loan according to their interest payment policy. Other source of loan is informal institution like shark and pawn and they lend to farmer with high interest rate.

### **3.3.1 Institutional Credit**

Formal credits are those credits which are provided through established institutions like 'Mya Sein Yaung', provincial government's cooperatives and micro finance along with NGO and INGO organizations for agriculture development. According to formal credit almost fulfills 80 percent of the credit needs of the farmers, while it is assumed that the remaining gap is covered by informal sources. These loans are provided after its specified

procedure and concerned terms and conditions are met. There are many institutional credits such as co-operative firm, Pact(microfinance), World Vision, Mya Kyun Tha, Mya Sein Yaung, Good brother microfinance and Chan Myae microfinance in Eain Me township and most of their interest rate are same. The result of survey in Eain Me township, Farmers are relied on Government's credit and other sources of non-institutional credit. Because these sources of funds are longer period of time than the other institutional and microfinance firm's credit. Farmers have no chance to access other income in during cultivated season. Institutional credit collects regular interest from farmer and they cannot pay regularly interest to that firms during cultivated season. Farmers need to repay their loan to Government and other informal credit after harvesting of their crops.

### **3.3.2 Non- Institutional Credit**

Informal credit market includes friends, relatives, village shopkeepers, traders, commission agents and many more. These sources of funds are for short period of time and charge a higher interest rate or can be determined by mutual agreement. These loans are made available for consumption as well as for the purchase of agricultural inputs. However, the major problem with these kinds of loans is they are inadequate and non- dependable. These loans have no proper documentation or others rule and regulations that is why most of the time farmers are facing a tough time in getting these loans. Furthermore, the data about the amount of informal credit disbursement is limited. Therefore, it is reasonable difficult to find its share in total agricultural credit supplied. The interest charges against such loans are also higher as compare to other. However, despite these problems, still informal lenders are playing significant role in the rural areas of Myanmar since traditional times. Informal sectors have comparative advantage in providing better services at low cost than formal sector. In rural area, rich people have better access to formal source of credit as compared to poor households because they lack facility of access to adequate formal credit and have to depend on informal lenders.

## CHAPTER 4

### ANALYSIS ON EFFECTIVENESS OF CREDIT ACCESSIBILITY AND LOAN UTILIZATION OF FARMERS

This chapter analyze the result of the fieldwork by the researcher. The first section states the profiles of the respondents of farmers of Eain Me township. It is followed by Analysis on Effectiveness of Agriculture Loan of the Farmer of Eain Me Township. The aim of this survey is to obtain some useful information associated with the profile and utilization of the farmer's agriculture loan.

#### 4.1 Research Design

This research is empirical in nature and it is conducted through questionnaires. This study measures the effectiveness of the agriculture credit has been measured towards the farmers of the Eain Me township. It will be answered with the help of a questionnaire in which all the important variables are included. Since the study is related to the effectiveness of agriculture credit of the customer so the targeted population in order to collect the data, is the farmers of Eain Me township of studied area. Stratifying sampling method is used to select the respondents in the study area. The first stage, there are many villages in this district and list of all those villages was obtained from MADB branch in Eain Me. From this list five villages namely Mezali, Kyakhatkwe, Htan Lay pin, Kyone Ma Yan and Kyone Sein were purposively selected where the number of borrowers was large. The second stage was to select the sample size. For this purpose, a list of borrowers in each village was obtained from the concerned MADB, Eain Me branch. A total 150 borrowers were selected from five villages of large borrowers by random sampling from the list obtained. The sample was proportionately distributed among the five selected villages as per below formula.

The sample size for proportional allocation  $n_i = n \frac{N_i}{N}$

Total Population of Household  $N = N_1 + N_2 + N_3 + \dots N_h = \sum_{i=1}^h N_i$

Total Sample of Household  $n = n_1 + n_2 + n_3 + \dots n_h = \sum_{i=1}^h n_i$

**Table (4.1) Research Design**

<b>Village</b>	<b>Population of Household</b>	<b>Sample of Household</b>
Mie Za Li Sar Phyu Su	167	10
Kya Khat Kawe	629	38
Htan Lay Pin	672	41
Kyone Ma Yan	450	28
Kyone Sein	541	33
Total	2459	150

Source: Field Survey (2018)

According to Table (4.1), 150 farmers from 5 Villages (Mie Za Li Sar Phyu Su, Kya Khat Kawe, Htan Lay Pin, Kyone Ma Yan, Kyone Sein) were chosen and participated in the research. The main target population was the individual farmers who have taken the Agriculture loan from MADB and other institution in which both males and females are included. In order to collect data, the borrowers from the Eain Me township were asked to cooperate by filling the questionnaire. Their answers for the questions reflect different characteristics of the customer towards the effectiveness of the Agriculture loans on farmers which is the focal point of the study. The loan borrowers were chosen on the basis of convenience sampling method. The reason for so was because of the scattered and huge population, restricted time and limited budget since it would be quite difficult to study all the villages of Eain Me township in such a limited time and with limited resources. A sample of 150 farmer were taken for the test and the respondents were approached individually.

#### **4.2 Profiles of Respondents**

Characteristics of the borrowers may have an important bearing on the receipt of loan from the institutional sources. Therefore, an attempt has been made here to investigate into some of important as well as relevant socio-economic characteristics of the sampled borrowers. These are Gender, Marital status, Age, Family size, Land ownership, education level, type of crops, etc. 150 sample farmers from Eain Me township is selected for this

study. The majority of the respondents were male as shown by 78% while 22% were female. This shows that majority of the small-scale farmers in the study area are male. On the age of the respondents, the study found that the majority of the respondents were between 46- 65 years (55%),37% were aged between 26-45 years, and 6% were aged over 66 years. These shows that majority of the small-scale farmers are youth. With regard to the education level of the respondents, 64% of the respondents indicated that high school primary was their highest level of education. With regard to the farm size, 76% of the respondents own up to 10 acre of farm land, 18% of the respondent own from 11 acres to 20 acres of farm land and 6% of the respondents own above 20 acre of farm land. The average farm size of the study area is between 30% and 70%.

**Table (4.2) Profile of Respondents**

<b>Particular</b>	<b>Number of Respondent</b>	<b>Percentage</b>
Gender		
- Male	118	78
- Female	33	22
Marital Status		
- Single	12	8
- Married	138	92
Age (Years)		
18 to 25	3	2
26 to 45	55	37
46 to 65	82	55
66 to 85	10	6
Education		
- Primary School	96	64
- Middle School	29	19
- High School	22	15
- Under Graduate	1	0.7
- Graduate	2	1.3
Number of land (Acres)		
1- 5	40	27
6 - 10	74	49
11- 20	27	18
21- 30	7	4
31- 50	3	2

Source: Survey Data, October 2018

#### **4.3 Farming Condition of the farmers in Eain Me Township**

Farmer usually cultivate the crops in two time which are monsoon and winter. The main crop is paddy and it include many type of paddy such as Paw San, Manaw Phyu, Hnan Kar and Sin Thukha. The average output of the paddy is between 40 Bushels and 100

Bushels. The following information are survey result based on 150 farmer's which data include type of paddy, time of crops and output result of paddy.

**Table (4.3) Type of Paddy**

<b>Type of Paddy</b>	<b>Number of Farmer</b>	<b>Percentage</b>
Paw San	63	42
Ma Naw Phyu	23	15
Hnan Kar	24	16
Sin Thu Kha	40	27
Total	150	100

Source: Survey Data, October 2018

Most of the farmer cultivated Paw San according to market demand which type of paddy can get higher price in market and Sin Thu Kha is the best rate of high yield that farmers want to cultivate for increase their income. Farmers accept Hnan Kar and Ma Naw Phyu is first rate of resistance paddy type due to their their knowledge and farming experience.

Normally, Farmer cultivate the paddy two time in a year but some of the farmer cannot cultivate in winter due to their soil condition. They plant other crops such as bean, chili and coconut and palm during wither season. The following table shown in cultivated nature of respondents.

**Table (4.4) Cultivated Culture of Respondents**

<b>Seasonal Crop &amp; Paddy</b>	<b>Number of Farmer</b>	<b>Percentage</b>
Monsoon Paddy	38	25
Monsoon Paddy & Winter Paddy	98	65
Monsoon Paddy & Other Crops	14	10
Total	150	100

Source: Survey Data, October 2018

In research area, the average of paddy yield is 80 bushels and above. Farmer cultivated with crop rotation and seed selection methods and this method increase productivity and improve farm output. The average paddy yield status is shown in Table 4.5.

**Table (4.5) Average Paddy Yield**

<b>Paddy Yield (Bushels)</b>	<b>Number of famer</b>	<b>Percentage</b>
40 – 60	9	6
61 – 80	40	27
81 and above	101	67
Total	150	100

Source: Survey Data, October 2018

#### **4.4 Analysis on Agriculture Credit and Loan Utilization**

A logical questionnaire is used for data collection. The research instruction is developed by the researchers themselves. A total of 16 questionnaires were filled completely and useable. The questionnaire has four variables each variable has its separate questions which are used to record individual response. The first variable which has the four questions is about the credit accessibility on farmer, in second variable is about loan utilization of farmer it has four questions this part of the questionnaire asks the respondent for measure on utilization of Agriculture loan term, in third variable which is about profitability and productivity in which ask the respondents to give its response whether after using the loan, their income and productivity increased or decreased. This questionnaire is not basically on the likert scale and converted into likert scale with the dummy questionnaire for data analysis. That the scale of 5 in which 5 show the highest value and 1 show the lowest value.

##### **4.4.1 Credit Accessibility of Farmers**

In research area, most of the farmer borrow agricultural credit from institutional source that they prefer to borrow from MADB due to low interest rate. Some farmer did not receive sufficient fund from MADB for their full cultivated area and they try to receive other source of loan from microfinance firm with fair interest rate. Farmer who cannot provide collateral

(Form 7) borrow from microfinance firms and other lender which include pawn, shark and their relatives with high interest rate. The sample size of farmers 150 from five villages of Eain Me township borrow agricultural credit sources and use of credit information are as follow;

**Table (4.6) Source of Credit and Usage of Credit**

Source of Credit	Number of Farmer	Usage of Credit
MADB	110	74
MFI	9	6
Both MFI& MADB	12	8
Others Lender	19	12
Total	150	100

Source: Survey Data, October 2018

Credit accessibility of farmer are depended on term of loan is appropriate for farmer, loan amount is sufficient for farmer, easy loan documentation procedure and low interest rate of loan. Analysis of Credit Accessibility on farmer is shown in Table (4.7).

**Table (4.7) Farmer Perception on Credit Access**

Item	Farmer Perception on Credit Access	Mean	Standard Deviation
1	Term of loan is appropriate for farmer	3.96	0.554
2	Loan amount is sufficient for farmer	3.97	0.996
3	Easy loan documentation procedure for farmer	4.16	0.625
4	Low interest rate loan for farmer	4.03	0.794
	<b>Overall Mean</b>	4.03	

Source: Survey data, 2018

Respondents Strongly agreed the loan interest rate is low and easy loan documentation procedure. The results show strongly agreed due to Mean scores of them are between 4 and 5. Respondents also agreed on term of loan is appropriate for farmer

(Mean=3.96) and loan amount is sufficient for farmer (Mean= 3.97). The overall satisfaction of respondents is 4.03.

#### 4.4.2 Loan Utilization of Farmers

The main subheads of the input cost on farming as considered in the present study are purchase of seed/seedlings, manure and fertilizer insecticides, charge for irrigation water, hire charge for human labor and charge for hire cost of tractor and harvesting machine, information on loan utilization of farmer is given in table 4.8.

**Table (4.8) Loan Utilization of Farmers**

<b>Item</b>	<b>Loan Utilization of Farmer</b>	<b>Mean</b>	<b>Standard Deviation</b>
1	Loan amount is used for purchase of farm input (Seed, Fertilizer, Fuel cost, insecticide)	4.37	0.651
2	Loan amount is used for farming machinery rental fee	4.43	0.617
3	Loan amount is used for land preparation	4.52	0.552
4	Loan amount is used for labour hiring	4.43	0.659
	<b>Overall Mean</b>	4.44	

Source: Survey data, 2018

Table 4.8 indicate that among the various items of loan utilization, almost all respondents used the loan in utilization of famers on agriculture input cost Mean value is 4.37 and loan is also used for labour hiring Mean value is 4.43, the mean scores of them are mean value cut off 3. Moreover, loan amount is utilized for land preparation (Mean= 4.52) and farm machinery rental fee (Mean= 4.43) most of the respondents agree them. The average satisfaction of respondents with all the loan utilization question is 4.44.

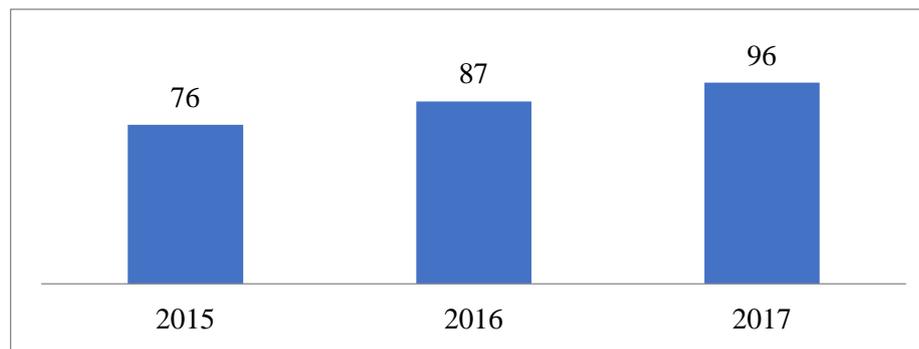
## 4.5 Farm Performance

Farmer access to credit and effectively utilize of loan to improve farm performance. It can be proved that high paddy and increase farm income upon Farmer utilize quality seeds and input due to access of credit then their farming output is increase. Choosing suitable rice harvesting time and adoption relevant farming methods can improve productivity so that high quality and paddy yield will receive higher price in market that increase farmer income. Effectively and early planting, crop rotation, reduce damage grain and quality deterioration can get higher selling price of paddy. All are important factors to improve farm performance.

### 4.5.1 Paddy Yield

The result of survey data on total 150 farmers are increased in farm productivity according to historical data of 2015, 2016 and 2017. In 2015, the average of their farm output is 76 bushels, increase to 87 bushels in 2016 and as the result of 2017 is 96 bushels base on their one acre cultivation. Farmer choose to cultivate quality seeds, using with quality input, adoption new farming technology and other factors such as planting kinds of paddy which is weather resistant can be increased high yield year by year. They can earn more income when they selling their output in market. The average paddy output rate as shown in Figure 4.1.

**Figure (4.1) The Average Paddy Yield of the Respondents**



Source: Survey Data, October 2018

Four statements are included in questionnaire whether respondents' profitability and productivity through the Agriculture loan. That comes to reflecting opinion of income. There are no complete answers for some questions due to difficulty to measure the qualitative degree by respondents.

**Table (4.9) Paddy Yield of Farmer**

<b>Item</b>	<b>High Paddy Yield</b>	<b>Mean</b>	<b>Standard Deviation</b>
1	Farmer used high quality input to increase paddy yield	4.52	0.552
2	Farmer harvested paddy in suitable time for high yield	4.43	0.659
3	Farmer utilized seed selection for increasing crop yield	4.03	0.794
4	Farmer adopted relevant farming method for high yield	3.96	0.554
	<b>Overall Mean</b>	4.24	

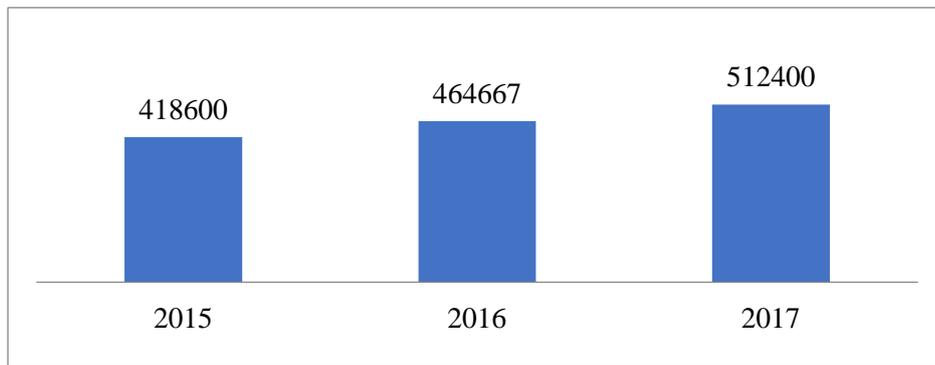
Source: Survey data, 2018

According to Table 4.9, it was founded that high yield can cause improve farm performance through Agriculture loan; all respondents agreed that Utilization of high quality input (Mean=4.52) and choosing suitable rice harvesting time (Mean=4.43). And also Mean value 4.03 and 3.96 show that the respondents agree for the statement of adoption relevant farming methods and choosing suitable rice harvesting time are higher than the cut off value 3. It shows that respondents agree to increase high yield.

#### **4.5.2 Farm Income**

The survey data of analysis on effect of credit accessibility in 150 farmer's income results are significantly increase in year by year (2015 to 2017). Selling price of paddy is also increasing during these years and it will affect on this result. The following data are average paddy selling price of 150 farmers upon 100 Tins.

**Figure (4.2) The Average Selling Price of Paddy per 100 Bushels**



Source: Survey Data, October, 2018

To analyze improve farm performance on increase income factors such as crop rotation, early and effectively planting, reduce damage and high selling price for four questions are prepared for farmers as follow;

**Table (4.10) Farm Income of the Farmer**

Item	Farm Income of the Farmer	Mean	Standard Deviation
1	Farmer planted early and effectively for increase income	4.43	0.651
2	Farmer used crop rotation for increasing crop yield	4.37	0.617
3	Farmer reduced grain damage and quality deterioration	4.16	0.625
4	Farmer earned highest selling price in market	3.93	0.428
	<b>Overall Mean</b>	4.22	

Source: Survey Data October, 2018

According to table (4.10), it shows whether farmers aware or not aware of farm performance about increase income. The respondents 150 described their degree of agreement is agreed on the Crop rotation for increasing crop yield (Mean = 4.37) and Plant early and effectively (Mean = 4.43). Most of the respondents also agree on the rest statements of reduce grain damage and quality deterioration (Mean= 4.16) and selling paddy with higher price (Mean= 3.93). Overall Mean score is 4.22 show that all respondents are fairly agreed all the above statements from above table.

#### **4.6 Regression Analysis on determinants of Farm Performance (Paddy Yield)**

In this study, regression analysis is applied in order to analyze the effect on paddy yield. The dependent variables (paddy yield) are explained by the four independent variables (appropriate loan term, sufficient loan amount, easy loan documentation procedure and low interest rate of loan).

Analysis of variance is used to test the significance of the regression model as pertains to differences in means of the dependent and independent variables. The value of F is 17.061 and significant at 1% ( $p=0.000<0.01$ ). Thus, the regression model is statistically significant with paddy yield.

Table 4.11 show that regression results between dependent variable (paddy yield) and independent variables (appropriate loan term, sufficient loan amount, easy loan documentation procedure and low interest rate of loan). Results obtained from linear regression analysis for credit accessibility (appropriate loan term, sufficient loan amount, easy loan documentation procedure and low interest rate of loan) are significant at 1% level. The value of adjusted  $R^2$  is 0.301 that reveals 30% of total variation in paddy yield per acre are explained by four factors; appropriate loan term, sufficient loan amount, easy documentation procedure and low interest rate of loan.

The regression coefficient in table 4.11 show that an increase of appropriate loan term by one unit will increase high yield by 0.265 units at 1 % significant level while other independent variables such as sufficient loan amount, easy loan documentation procedure and low interest rate of loan are constant.

One unit increase in sufficient loan amount will result in 0.247 units increase in high yield at 1% significant level while other independent variables such as appropriate loan term, easy loan documentation procedure and low interest rate loan are remained unchanged.

Easy loan documentation procedure increase one unit will result 0.156 units increase in high yield at 1% significant level while other independent variables such as sufficient loan amount, low interest rate of loan and appropriate loan term are constant.

1 unit increase in low interest rate loan will result 0.160 units increase in high yield at 1% significant level while other independent variables such as easy loan documentation procedure, sufficient loan amount and appropriate loan term are remained unchanged.

They had positive correlation suggesting that increase use of effective credit accessibility as well as high yield will improve farm performance.

**Table (4.11) Relationship Between Credit Accessibility and Farm Performance  
(Paddy Yield)**

Variables	Unstandardized Coefficient		Standardized Coefficients	t	Sig
	B	Std. Error			
(Constant)	1.410	0.483		2.921	0.004
Appropriate loan term	0.265	0.070	0.286	3.778	0.000***
Sufficient loan amount	0.247	0.036	0.479	6.854	0.000***
Easy Documentation	0.156	0.057	0.190	2.738	0.007***
Low Interest rate loan	0.160	0.050	0.247	3.210	0.002***
R=0.566, R <sup>2</sup> = 0.320, Adjusted R <sup>2</sup> =0.301, F=17.061(p value =0.000)					

Dependent variable is paddy yield

Note: (\*\*\*) - 1% level of significance)

#### **4.6.1 Regression Analysis on Determinants of Farm Performance (Farm Income)**

In this study, regression analysis is applied in order to analyze the effect on farm income. The dependent variables (farm income) are explained by the four independent variables (Input cost, machinery rental fee, hired labour and land preparation cost).

Analysis of variance is used to test the significance of the regression model as pertains to differences in means of the dependent and independent variables. The value of F is 18.004 and significant at 1% ( $p=0.000<0.01$ ). Thus, the regression model is statistically significant with farm income.

Table 4.11 show that regression results between dependent variable (farm income) and independent variables (Input cost, machinery rental fee, hired labour and land preparation cost). Results obtained from linear regression analysis for loan utilization (Input cost, machinery rental fee, hired labour and land preparation cost) are significant at 1% level. The value of adjusted  $R^2$  is 0.313 that reveals 31% of total variation in farm income are explained by four factors; Input cost, machinery rental fee, hired labour and land preparation cost.

The regression coefficient in table 4.12 show that an increase input cost by one unit will increase farm income by 0.226 units at 1% significant level while other independent variables such as machinery rental fee, land preparation cost and labour hiring cost are constant).

One unit increase in machinery rental fee will result in 0.212 units increase in farm income at 1% significant level while other independent variable ssuch as input cost, land preparation cost and hired labour cost are remained unchanged.

Land preparation cost increase one unit will result 0.186 units increase in farm income at 1% significant level while other independent variables such as machinery rental fee, hired labour charges and input cost are constant.

1 unit increase in labour hiring cost will result 0.156 units increase in farm income at 1% significant level while other independent variables such as machinery fee, input cost and land preparation cost are remained unchanged. They had positive correlation suggesting that increase use of effective loan utilization as well as farm income will improve farm performance.

**Table (4.12) Relationship between Loan Utilization and Farm Performance  
(Farm Income)**

Variables	Unstandardized Coefficient		Standardized Coefficients	t	Sig
	B	Std. Error			
(Constant)	1.269	.433		2.933	0.004
Input Cost	0.226	0.065	0.278	3.487	0.001***
Machinery Rental fee	0.212	0.070	0.247	3.014	0.003***
Land preparation cost	0.186	0.067	0.194	2.770	0.006***
Hired labour	0.156	0.058	0.194	2.685	0.008***
R=0.576, R <sup>2</sup> = 0.332, Adjusted R <sup>2</sup> =0.313, F=18.004(p value =0.000)					

Dependent variable is farm income

Note: (\*\*\*) - 1% level of significance)

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

This chapter presents findings of the study and recommendation for Effect of Credit Accessibility and Loan Utilization on Farmer of Eain Me Township.

#### 5.1 Findings

Myanmar is an agricultural country. Majority of people live in rural areas and are dependent directly or indirectly on agriculture pursuit. Majority of the farmers of our country are landless marginal and small ones. They don't have enough money to run the various production activities related to agricultural production. Seed fertilizer, Irrigation technology to a greater extent has enhanced production cost exporting extra between to the rural poor. Mechanization in agriculture has added for the cost to production of crops livestock and fisheries. It is therefore, nowadays not attempt possible to meet up such huge cost of producing agricultural commodities out of all ready financially had pressed rural poor own pocket. People, especially farmer, therefore, have to reason to borrowings from external source of credit. The government loan and other institution provides Agriculture loan to farmer.

The present study is concerned with the farmers taken credit accessibility from MADB, other microfinance institution and money lender and utilization of agricultural loan. The study area covers farmers from Eain Me township. In concern of Agriculture loan service provided by MADB and other institutions, they provide different interest of agriculture loan by different organizations and terms of loan are defined by each organization.

Concerning of effectiveness on credit accessibility mainly rely on government organization (MADB) and it is cover clients' financial needs for input cost other than their owned capital, to analyze themselves their income, input cost, household cost, other income (financial Literacy), to reduce their financing cost from loan shark, pawn shark with high interest rate, to give loan on the right time of financial needs as per crop season, to explore term of loan whether they really need it or not and to extend their business, to be available updated loan and other products information, to improve their profit from farming.

According to analysis of the respondent's characteristics, distribution of land shows that small farmers constituted 76 percent of all farmers surveyed and medium farmers who

constituted 24 percent of the total farm households were found in two farm size groups. According to the results, the respondent's social characteristics show that the average age of the respondents is age between 45 and 65 years old. Mostly are married male. The result mentions that education levels in the study area are fair, mostly are primary and middle school level. Farmers from Eain Me township mostly grow Paddy in Monsoon season and Black gram in Winter season.

As regard of the Effectiveness of credit accessibility and loan utilization is analyzed and measured in terms of their effectiveness on loan utilization, credit accessibility, paddy yield and farm income. The result was conducted by using these four variables. The analysis of this study resulted in the following summary of findings.

Regarding to the effect of credit accessibility, almost all respondent perception on credit accessibility show that easy loan documentation and low interest rate loan is most important things for farmer. And also, loan tenor and loan amount is appropriate and sufficient for farmers.

The results from analysis of loan utilization show that farmers fully utilized their credit to various sources of input such as seed, fertilizer, fuel cost, insecticide, hired labor, land preparation and farming machinery rental fee.

According to the review on paddy yield of farm performance, most of the respondents answered that they utilized quality input to their farm and planting with seed selection for increasing crop yield. Choosing suitable rice harvesting time and adoption relevant farming methods to improve their farming activities and performance.

The analyzed results from farm income on farm performance. Plant early, plant effectively, reduce grain damage and quality deterioration, crop rotations are improved high paddy yield and they get higher selling price from farm output.

The results from studied famers' income and productivity showed that most of the respondent answered that they earn more income from crops, gained better yield and can use high quality of agricultural inputs. Thus, Quality farm output are increased and farmers received high selling price in market.

### **Problem of Credit Disbursement**

The sluggish growth in rural institutional lending in Myanmar which include certain factors and there are the policy makers are facing is the lack of efficiency in agricultural

credit disbursement is one of the most important issues. Other main difficulties faced by the farmers in obtaining agricultural credit from the formal institutions is cumbersome procedure and limitation of loan amount. It is considered the prime restriction in securing loans from institutional sources. The maximum loan limit one hundred fifty thousand per acre is insufficient amount for farmer to buy their input of farms. There is considerable political pressure in disbursement of agricultural credit. Institutional credit is not offered more than ten acres of total farms according to their policy and farmers cannot get fully loan amount upon their real own acres. Formal institutions always ask for collateral when they issue credit. However, majority of farmers are resource poor and this makes cheap accessibility difficult for small farmers. Banking institutions have difficult credit rules which obstruct small and marginalized farmers from accessing the loan.

There is risk involved in lending to farm sector because of the associated uncertainties and probability of default. The operation of banks has not been extended and so the farmers are provided expensive financial support. There is no proper research and no specific policy from the government side on the agriculture credit requirement and current credit needs of the farmers. The rate of interest is not cheap on such loans which despite benefiting farmers harm them. Because they have to pay back the principal loan along with this interest rate.

## **5.2 Recommendations**

The recommendations which need attention of both governmental agencies and financial institution to utilize the agricultural credit in an efficient way so that farmers may get maximum profits and their living standard be improved. The first recommendation that to increase the accessibility of small and marginal farmer to formal agricultural credit through commercial banks with low interest on agriculture credit due to repayment behavior of farmer. The other things are loan tenor should be adjustable in case of any natural calamity or failure of crop, the period of repayment should be extended at the convenience of borrower and also the procedure for obtaining loan should be made simple in terms of time, acceptance of security, documentation and disbursement of loan so that farmers feel easy and may avail it. Financial institution need to develop sound tracking and monitoring system to do regular supervision and monitoring such as regular visit to the farmer's field so that the credit be used for the right purpose. Another important thing is credit should be provided on time because in agriculture timing is crucial; otherwise delay will not help them to get maximum benefits from credit. The Government organization (MADB) should provide credit to farmers

according to their actual needs and importance of crops and should target and advance loans to small rural farmers, as they are the marginalized section of the society. In fact government banks can reserve special quota for small farmers to support their effective cultivation.

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# APPENDIX A

## Effect of Credit Accessibility and Loan Utilization of Farmer Questionnaires

### Section I Profiles of Respondents

<b>1</b>	<b>Name</b>	.....
<b>2</b>	<b>Male/Female</b>	.....
<b>3</b>	<b>Single (or) Married</b>	.....
<b>4</b>	<b>Age</b>	
	18-25	<input type="text"/>
	26-45	<input type="text"/>
	46-65	<input type="text"/>
	66-85	<input type="text"/>
<b>5</b>	<b>Education</b>	
	Primary School	<input type="text"/>
	Middle School	<input type="text"/>
	High School	<input type="text"/>
	Under Graduate	<input type="text"/>
	Graduate	<input type="text"/>
	Post Graduate	<input type="text"/>
<b>6</b>	<b>Size of Family</b>	
	2	<input type="text"/>
	3	<input type="text"/>
	4	<input type="text"/>
	5 and above	<input type="text"/>
<b>7</b>	<b>Crop Type</b>	.....
<b>8</b>	<b>Agricultural Land Acre</b>	
	1-5 Acres	<input type="text"/>
	6-10 Acres	<input type="text"/>
	11-20 Acres	<input type="text"/>
	21-30 Acres	<input type="text"/>
	31-50 Acres	<input type="text"/>

**Analysis on Effectiveness of Agricultural credit on Farmers of Eain Me Township**

**5 Points Likert Scale Measurement**

**5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree**

<b>No</b>	<b>Farmer Perception on Credit Access</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1	Term of loan is appropriate for Farmer.					
2	Loan amount is sufficient for farmer					
3	Easy loan documentation procedure					
4	Low interest rate of loan					

<b>No</b>	<b>Effectiveness of Credit Accessibility</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
1	Loan amount is used for purchase of farm input (Seed, Fertilizer, Fuel cost, Insecticide)					
2	Loan amount is used for farming machinery rental fee.					
3	Loan amount is used for land preparation.					
4	Loan amount is used for labor hired					

No	Paddy Yield	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Utilization of high quality input					
2	Choosing suitable rice harvesting time					
3	Seed selection for increasing crop yield					
4	Adoption relevant farming methods					

No	Paddy Yield	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Plant early and effectively					
2	Crop rotation for increasing crop yield					
3	Reduce grain damage and quality Deterioration					
4	Selling paddy with higher price					

## APPENDIX B

Figure (3.1) Map of Eain Me Township



Source: Google