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MASTER OF BANKING AND FINANCE PROGRAMME**

**SOURCES OF FINANCE AND LOAN UTILIZATION OF
FARMERS IN LAPUTTA TOWNSHIP**

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ABSTRACT

This study aims to identify the sources of finance and loan utilization of farmers and to analyze the effects of loan utilization upon the farm performance of farmers in Laputta Township, Ayeyarwaddy Division. Data for the study was collected from both primary and secondary sources by interviewing with farmers of Laputta Township with structured questionnaires. This survey is based on 120 farmers (10% of the total households) from 6 villages groups which are the highest paddy yield among 65 villages groups of Laputta township. The data collection period is during a year 2018. More than 82% of the respondents were taken the loan from formal sources and other 18% of the respondents were taken the loan from the informal sources. Among the formal loan borrowers, 51% of the respondents took the loan from both MADB and other financial institutions. Farmers applied loan from those different sources of finance that they can access in order to fulfill the fund requirement for their farming business. The study found out that both of the loan utilization on purchase of productive seeds, hired labors, farming machinery rental fees and fertilizers and amount of loan received have positive effect on the paddy yield per acre. Thus, those credit institutions should consider to improve their credit services in order to assure that more households benefit from it and sharing knowledge to farmer to utilize the agriculture loan properly and effectively in their farming.

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CHAPTER I

INTRODUCTION

Developing countries are suffering from financial shortage in almost all economic sectors particularly in agriculture sector. Agricultural loan plays an important role in agricultural sector's development. Farm loan 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.

Agricultural financing is one of the critical factors to develop rural areas in developing countries. Payment of bank loan is a way of financing. In fact, facilitation of access to loan can raise amount of productive investment. Agricultural loan has a crucial role for elimination of farmer's financial constraints to invest in farm activities, increasing productivity and improving technologies.

Generally, agricultural loan 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 (Catherine Munuo, 2013). The lack of finance for agriculture limits increase in productivity and investment in value added activities. The budget balance becomes a constraint with limited access to loan, where expenditures have to remain less or equal to the sum of revenues during the period. Hence, credit constraint limits the optimum production or consumption choices (Jackson Opati Echoka, June-2010). This can also effect upon the type of technology used and the scale of operations that a farmer can adopt on his farm.

In other words, if a producer faces an infinite supply of liquidity at a given price, the production decisions will be independent of consumption decisions. When credit is rationed, some borrowers cannot obtain the amount of loan they desire at the prevailing interest rate, nor can they secure more credit by offering to pay a higher interest rate. In such circumstances, liquidity can become a binding constraint on many farmers' operations. Facing such a situation, households have to choose how to invest and what inputs to buy, depending on the level of credit they receive. (Nilar Win, MADB Bank, 2013)

The rural population in Myanmar 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. Since cash flows and savings in rural areas for the majority of households are small, rural households typically tend to rely on credit. 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 and thereby help them avoid debt-traps that are common in rural area. 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.

It can be seen that the role of financial institutions is the crucial for the successful agricultural diversification. Although, there have been a number of institutions that have been involved in agricultural financing overtime, actual investment in the sector has not been strong enough. However, financial institutions also find it difficult to get involved within farming businesses in the remotely rural regions due to the risks involved. Farmers are unable to utilize their loan efficiently because they have no sufficient skills in credit management. Apart from the lack of credit management skill, they do not have sufficient knowledge about the other risks such as production risks, marketing risks, and price risks which increases the fear of financial institutions to offer credit in the farming sectors.

1.1 Rationale of the Study

Agriculture sector in Myanmar accounts for 45 percent of GDP, while providing employment for 70 percent of the workforce. Therefore, it continues to be the mainstay of Myanmar's economy. Higher levels of investment and access to loan are essential for the development of Myanmar's agriculture sector to reach its full potential, according to the experts. (Myanmar business today, 2017). The government pay attention to greater emphasize on agriculture mechanization and modernization in its main economic objectives. Almost 70% of the population lives in rural areas relying on agriculture and related business. (Nilar Win, MADB bank, 2013).

In Myanmar, many people in rural areas do not know how to use bank and what the bank facilities are. Most of them only try to get loan from informal sectors at high rates of interest. Another major obstacle is a lack of access to finance. Only 2.5 percent of loans in Myanmar go to the rural sector, with some segments such as landless farmers cut off from all formal financial services.

The lack of access to capital, especially in the form of medium and long-term loans, is a constraint on investments needed to improve output and diversify toward higher value added products. The initiative is done by the government and different donor agency to finance the farmers have not been able to cover the costs associated with agricultural activities to farmers. As the result, farmers continue using traditional farming and depend on informal financial institutions to cover up their financial cost (Catherine Munuo, 2013).

The Rural and Agricultural loan in Myanmar provided by financial institutions such as Myanmar Agricultural Development bank, other semi-formal financial institutions (MFIs) and donors. Myanmar Agricultural Development Bank (MADB) is the largest credit provider in rural areas. It possesses the great amount of client and number of credit disbursed among the formal financial institutions. (Nilar Win, MADB bank, 2013).

It is providing credit to 60% of agricultural households, 35% took MADB loans only and another 25% took both MADB and non-MADB loans. Only 11% were reliant entirely on non-MADB loans. The rest 27% of households reported taking no agricultural loans at all. (FSP Research Highlight #9, 2017). The informal institutions charge very high interests and often do not meet the needs of the farmers. For this case, microfinance and other informal channels become as the substitutes for informal loan.

Myanmar's agriculture sector has insufficient financing. In 2013-2014, the total amount of credit provision for the rural economy was only 10.3 trillion Kyats, the largest volumes (52.8 Percent) were provided by informal moneylenders, other providers and agricultural input companies. According to the current financing system, it is very thinly served for farming sector. The maximum loan size an MFI can produce by law is 5 million Kyats but only a few MFI's can serve big loans above 0.2 million Kyats to only a few of their clients. Although MADB has a greater market share, it is more likely that the cooperative societies in serving loan of under 0.5 million. Loans are provided based

on the registered land tenure and it provides for up to 10 acres. According to the latest MADB figures, its coverage reached 2.2 million farmers in 2016, focusing mainly on paddy production. Most of the farmers who have the poor creditworthiness or do not have registered land tenure have access only to the informal moneylenders whose interest rates are unregulated.

Apart from MADB, no other financial institutions offer significant agricultural financing in Myanmar. Private commercial banks currently provide commercial loans but their validation systems, collateral requirement, interest rates and loan terms are not designed for farmers and agribusinesses.

Since the Microfinance Law was enacted in November 2011, over 200 entities have entered in the financial markets. These MFIs include rice and other agriculture-specialized companies that serves about 200,000 farmers. However, MFIs mainly finance nonfarm business loans and their outreach to farmers have been rather small compared to that of MADB.

This study focused the need to carry out further analysis on the source of finance and the impact of the utilization of agriculture loan of the selected township within Ayeyarwaddy Division. Since, the Ayeyarwaddy is the highest yield of rice in term of Myanmar Agriculture Statistical data 2017. It possessed 60% of the country's yield. The average farm size and annual income from agriculture production are the biggest among other areas. (JICA Two Step Loan Survey 2014).

Laputta which is situated in Ayeyarwaddy delta region is one of the economics city which is based on agriculture, livestock, fisheries and salts production businesses. It was affected by cyclone Nargis in 2018 and cyclone Tsunami in 2014. However, Government and NGOs support for the rehabilitation of the region and it backed to the normal stages, in all sectors especially in economics, in short period of time. Furthermore, it became as the highest yield cultivation district of Ayeyarwaddy Division in 2017. According to the statistical data, it possessed 336,519 acres of yield in 2017, which is the highest one among the other districts within Ayeyarwaddy Division. (CSO MADB, 2017). Therefore, this research was conducted to analyze the highest yield productive area, Laputta Township. Moreover, this analysis focused on the identification of the sources of finance for farmers, measure and the utilization of the loans and it also focused

on the analysis of the relationship between loan utilization and the performance of the farmers.

1.2 Objectives of the study

The main objectives of this study are as follow:

1. To identify sources of finance and loan utilization of farmers in Luputta Township, Ayeyarwaddy District and
2. To analyze the effect of loan utilization upon the performance of farmers.

1.3 Scope and Method of the study

This study is focused on the accessibility of agricultural loan among farmers in Laputta Township, Ayeyarwaddy Division. Two-stage random sampling method is used to collect the primary data. There are all together 65 groups of villages in the township, among them 6 groups of villages (10%) were selected for the first stage. As for the second stage, 120 farmers (10% of the total population of households) were selected from each of the selected group of villages to conduct the survey by using structured questionnaire. Descriptive analysis, correlation and liner regression methods are used. This research uses both primary and secondary data in order to fulfill the objectives of the study. During the field trip to Laputta, meeting and open discussed with mangers from MADB and other MFIs in Laputta, Township General Administration office, District General Administration office and District Agricultural Department were conducted and collected the necessary data for the study. The secondary data were collected from previous studies, thesis, reports, related books, journals and internet websites.

1.4 Organization of the Study

This study is organized with five chapters. Chapter one is introduction which presents the rational of the study, objectives, scope and method of the study. Chapter two is the literature review and theoretical background of the study. Chapter three is Background study of the of *Luputta* Township, Ayeyarwaddy District, Chapter four contains the analysis on the source of finance and utilization of loan of farmers and the explanation of the primary data from the survey in Laputta Township and Chapter five is conclusion which will discuss all the finding, recommend and suggest the need for the further research and study.

CHAPTER II

THEORETICAL BACKGROUND

This chapter provides the literature review concerning the theories and research finding from previous studies. There are nature and role of agriculture finance, different sources of finance for agriculture loan, loan utilization pattern, and impact of loan utilization on the productivity of farms and income of farmers.

2.1 Nature of Agriculture Finance

Agricultural finance is the study of financing and liquidity services credit provides to individual farm units. It can also consider as an economic study of borrowing funds by farmers, the organization and operation of farm lending agencies and of society's interest in credit for agriculture.

The role of agriculture financing is crucial in development of the agricultural business. The fund flow from the agricultural financing can stimulate the productivity of the limited farm resources. It is also one of the important interventions to solve the rural poverty (Linto, 1993). According to the study of Saboor et al., 2009, it is stated that credit has vital role for increasing agricultural production and timely provision of credit allows farmers to purchase the necessary inputs and machinery for farm operation.

Classification of the Finance

The term of the agriculture loan can be classified as three basic type. They are short-term, medium-term and long-term loans. In Desai. S.S.M (1990) study, it was reported that there are three terms of agricultural loan. The detail classification of each of the terms are described as follows:

Short-Term: The "short-term loans" are generally advanced for meeting annual recurring purchases such as seed, feed, fertilizers, hired labor expenses, pesticides, weedicides and hired machinery charges which are termed as seasonal loans/crop loans/production loans. These are expected to be repaid after the harvest. It is expected that the loan plus interest would be repaid from the income received through the enterprise in which it was invested. The time limit to repay such loans is a year.

Medium-Term (from 15 months up to 5 years): "Medium-term loans" are advanced for comparatively longer lived assets such as machinery, diesel engine, wells, irrigation structure, threshers, shelters, crushers, draught and animals, dairy/poultry sheds, etc., where the returns accruing from increase in farm assets is spread over more than one production period. The usual repayment period for such type of loan is from fifteen months to five years.

Long-Term (above 5 Years): Loans repayable over a longer period (i.e. above 5 years) are classified as long-term loans. "Long-term loans" are related to the long life assets such as heavy machinery, land and its reclamation, erection of farm buildings, construction of permanent-drainage or irrigation system, etc. which require large sums of money for initial investment. The benefits generated through such assets are spread over the entire life of the asset. The normal repayment period for such loans ranges from five to fifteen or even upto 20 years.

2.2 Different Sources of Finance

Since Credit is the crucial for the Agricultural Sector Development, there are many sources of finance are available for the agricultural financing which include the formal Credit Sources such as Banks and MFIs, semi-formal sources, NGOs and other informal sources, money lenders, friends and relatives.

The agricultural credit market consists of two broad segments i.e. the formal and informal. While talking about informal source, it composes of friends, relatives and money lenders. They lend money for short span of time normally for six months and charge high rate of commission. 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 they are in close vicinity to them. They get loan on the spot depending on their credit worthiness and relationship and how much cash is available by the money lender at that time.

While talking about formal sources of credit, the focus of study is on banks, MFIs and NGOs and Government Project such as Green Revolution. They 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.

All the formal credit sources require Form-7, farming permit, as collateral in Myanmar. The farmers who do not have Form-7 cannot access to the formal credit channels. They can only access to the informal credit channels with high rate of interest.

As for Myanmar Agricultural sector, different sources of finance are providing financial services and credit facilities to the farmers in rural area. MADB is the standing as the major sources and other formal sources like Cooperatives, MFIs such as PACT Global, Proximity, LIFT, NGOs and government projects which are providing and supporting the financial need of the farmers in rural area of Myanmar.

In Singh et.al. (1987) study, it was reported that the credit agencies in rural areas include government co-operative banks, NGOs, money lenders, land-lords, traders, friends and relatives, commercial banks and others. Further these sources of credit can be categorized as (a) Formal sources like commercial banks, co-operatives, NGOs and (b) Informal sources like money lenders, traders, land-lords, friends and relatives etc.

Prem (1996) also indicated that the Agricultural and Rural Development Banks have over the years emerged as important and major rural credit institutions in the co-operative sector and have performed valuable service in providing credit to the farming community and other entrepreneurs in rural areas.

Catherine (2006) studied the Credit Markets in Piura, Peru and examined why farm households prefer informal sector over formal institutions even though they have to pay high amount of interest if they select informal borrowings. It was expressed that those households borrow money from informal sources due to the easy to access and minimum transactions cost excluded from the formal sector.

Nayak and Manivannan (1998) studied on Potter and Terrakotta work in Orissa. In their study indicated that the source of loan in most of the cases was found to be from a private source rather than institutional sources. The sample reveals that 67(25.19%)

households have obtained loan from private sources while 26(9.78%) households have received loan from institutional sources.

From these above mentioned studies, it is learnt that why people prefer informal sources where they have to pay more interest while formal credits exist. The reason behind this is that farmers are normally risk averse as they do not have many collateral securities. Furthermore, interest rate is also significance for selection of credit source. The educational level of farmers for entering in the credit market also plays an important role which means that the educated farmers don't feel hesitation for taking loans from commercial banks at lesser rate of interest but the low educated farmers feel hesitate to take loan from the formal sources because they are afraid to seek in contact with the office. They prefer to take the loan from the other informal sources which don't need to take any complicate office procedures. Besides it, as for normally, most of the farmers do not use the loan for the same purpose for which loan was obtained which result in agricultural backwardness.

2.3 Loan Utilization

Tiwari. Naval Kishor (2011) indicated that the utilization of agricultural loan of the farmers can be identified as the following categories:

- (i) Productive uses
- (ii) Consumption needs and
- (iii) Unproductive uses

Productive Uses

Farmers use the agricultural loan for their credit requirements which directly effect on the agricultural productivity. They need loans for the purchase of seeds, fertilizers, manures, agricultural implements, livestock, digging and repair of wells and tube wells, payment for wages, effecting permanent improvements on land and etc. Repayment of these loan is generally not difficult because they can earn money from their process of the production.

Consumption Needs

Institutional credit agencies only provide agricultural loans for the agricultural purposes. However, farmers often require loans for their consumption as well. Sometimes, small parts of their agricultural loan go for their consumption needs and farmers also stretch their hand towards the moneylenders.

Unproductive Uses

Loans are taken for unproductive purposes such as litigation, marriages, social ceremonies on birth and death of a family member, education, health care, religious functions, festivals and etc.

According to the previous studies, it can be seen clearly through the loan utilization pattern of the farmers. Reddy (1979) reported that the majority of the farmers (82.05%) had utilized crop loan for the productive purpose and the remaining 17.95 per cent of them had not utilized the loan for the productive purpose.

Veeraraghavulu (1981) studied on “A critical analysis of Regional Rural Bank credit utilization behavior of the farmers of Prakasam district of Tamilnadu Pradesh”. It observed that the 46.67 per cent of farmers had utilized the loan for the purpose for which the loan were sanctioned and 41.66 per cent respondents had partially utilized the loan and also 11.67 per cent farmers had not used loans for proper purposes.

Kumar (1998) conducted a survey study on “Crop loan system in Samastipur district of Bihar”. It found out that about 34 per cent of crop borrowers utilized the loans for the purpose for which it was granted whereas 22 per cent of farmers diverted the crop loan to unproductive purposes.

2.4 Impact of Loan Utilization on the Productivity of Farms and Income of Farmers

Access to loan may not have direct impact on productivity, but it could have a positive and significant indirect impact through its positive influence on agricultural technologies adoption, increase capital for farm investment, hired labor and improved household welfare through improve health care and better nutrition.

According to the previous study of Feder et al., 1989, accessibility of loan or utilization of loan allows farmers to fulfill the cash requirement for the production cycle; land preparation, planting, cultivation and harvesting that are typically done over a period of several months in which very little cash revenue is earned, while expenditure on materials, purchased inputs and consumption need to be made in cash. Therefore, credit may affect farm productivity because farmers facing binding capital constraints would tend to use lower levels of inputs in their production activities compared to those not constrained.

Agricultural production is strongly depended by the fact that the inputs are transformed into outputs with considerable time lags, causing the farmers to balance its budget during the season when expenditure is high for input purchase and consumption. With the limited access to credit, the budget balance can become a constraint to agricultural production. This condition turns to lead the amounts and combinations of inputs used by a farmer may deviate from optimal level and it can limit optimum production or consumption choices. Economic theory suggests that farmers facing limited capital would tend to use lower levels and combinations of inputs than those whose production activities are not limited by the capital constraints.

Farmers' access to loan is crucial in the sense that it can facilitate the levels of input use closer to their potential levels when capital is not a constraint, consequently leading to higher levels of output per farm and productivity. This implies that the marginal contribution of credit brings input levels closer to the optimal levels, in this manner increasing output and productivity.

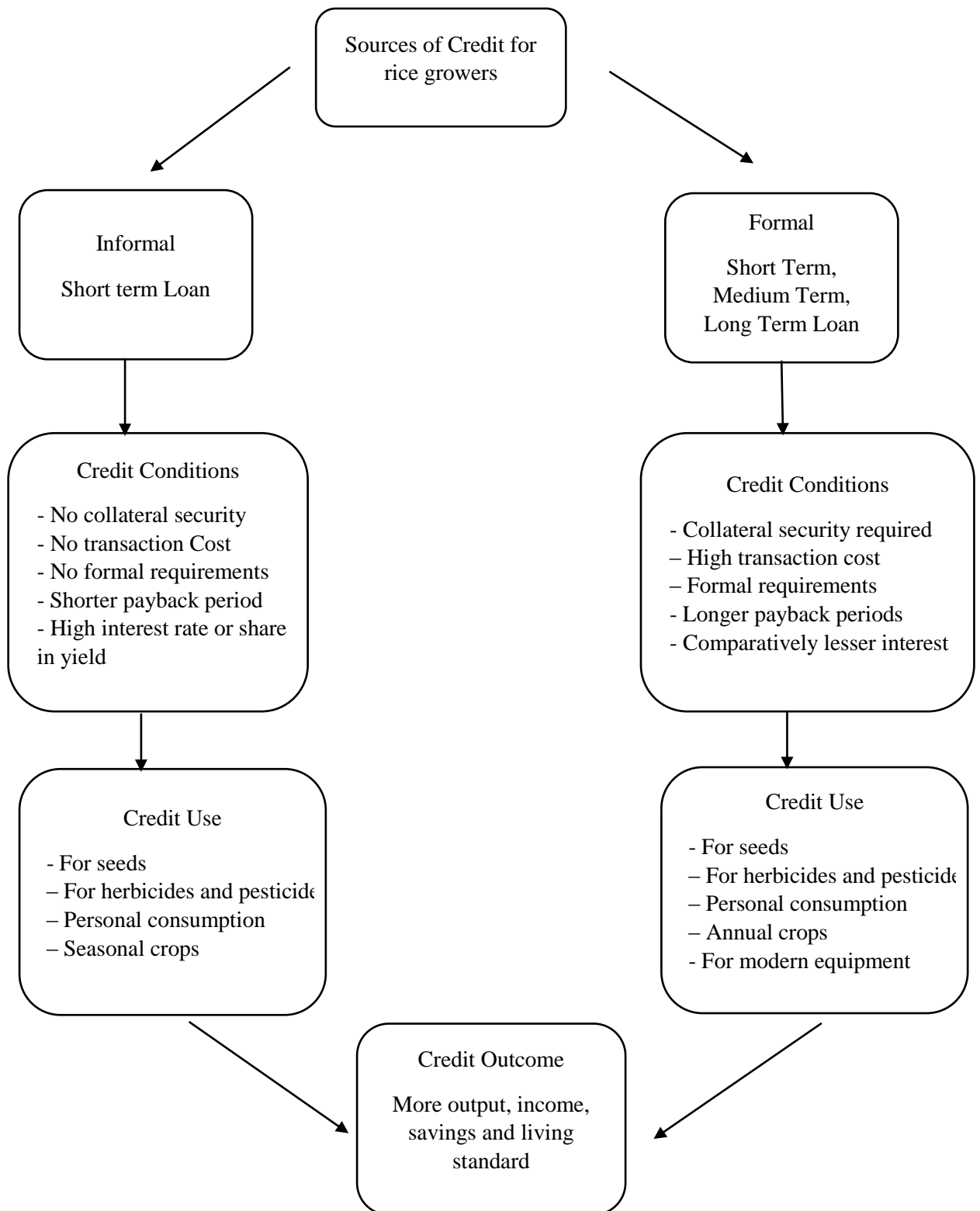
The previous study of Jackline Waithera Irungu (2013) analyzed the relationship between agricultural credit financing and financial performance of farmers, it found out that accessibility of loan and amount of loan received is highly affected the financial performance of farmers. This study also revealed that the loan repayment period and interest rate charged affected the financial performance of farm. Timely availability of loan enables farmers to purchase the required inputs and machinery for carrying out farm operation.

The impact of agricultural credit on agricultural production, efficiency and productivity can be seen through multiple channels. First of all, formal credit can be used

for purchase of inputs over the cropping season, enabling a farmer to maximize the yield from the cultivated area. This channel represents a direct and within season impact on production. Second, formal credit can be used to make investments in irrigation facilities, machines and draught animals that represent the use of credit to support agricultural production which typically impacts production with time lag. The third one is that the formal credit is often used to replace with informal credit associated with high interest burden.

Figure (2.1) represents the conceptual framework of previous study conducted by Tanveer Hussain (2012), which was analyzed the behavior of farmers in term of access to credit and based on looking into the influencing factors of the credit access of farmers by comparing informal (Arties) and formal institutional (commercial) credit providers.

Figure (2.1) Conceptual Framework of Previous Study

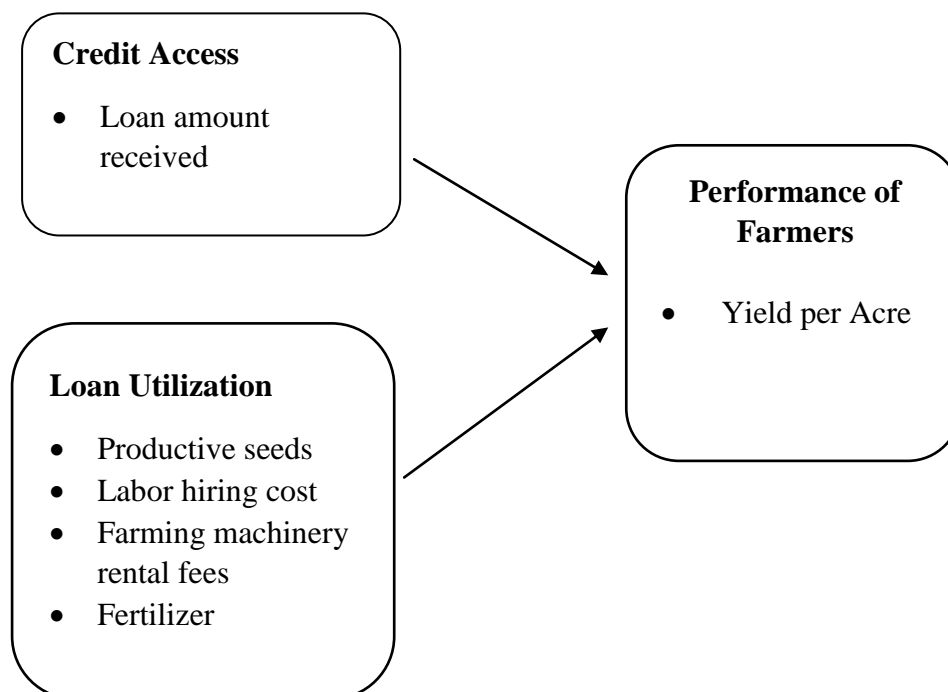


Source: Tanveer Hussain (2012)

2.5 Conceptual Framework of the Study

Agricultural loan accessibility plays an important role for improvement of quality and quantity farm products. Farmers can utilize the funds for their farming business investment by consuming the loan from the different finance sources. Generally, in agriculture sector, there are two main sources of credit financing segments. These include formal and informal credit financing channels. Informal sources of finance normally give short term loans for consuming capital for the farmers and sometimes for personal consumptions that they need. On the other hand, formal sources of finance are concerned with short, medium and long term loans depending on the nature of credit need by the farmers. But, both of these two channels increase the financial strengths of farmers so that they can purchase inputs (seeds, fertilizers etc.) and adopt modern technologies for getting more and more output. When farmers will have more yields, they will earn more and will be in better positions to fetch good prices in the open markets

Figure (2.2) Conceptual Framework of the Study



Source: Own Compilation

In Figure (2.2), the conceptual framework shows the independent variable of loan amount received and loan utilization of farmers on farming necessities which are purchase of productive seeds, use for labor cost, farming machinery rental fee and purchase of fertilizer influenced the high paddy yield.

Sufficient loan amount can support farmers to use upon their farming requirements. Farmers can utilize the loan amount to consume the necessary inputs for their farming activities such as productive seeds, fertilizers, farming machinery rental fee and labor hiring cost. This became the factor that eliminate the financial constraints for farmers to invest in farm activities and which in turn, increase the productivity of farms. Farmers can save their own fund to use farm input cost and they can use their fund to buy necessary farm equipment and purchase new farm land. As for the result, the loan utilization and sufficient amount of loan received create the benefit for the farmers and causes the high productivity of farms.

CHAPTER III

BACKGROUND STUDY OF AGRICULTURAL LOAN IN LAPUTTA TOWNSHIP, AYEYARWADDY DIVISION

This chapter describes background information of agricultural loan in Laputta Township. This chapter includes background information of Laputta Township, overview of agricultural business, credit accessibility and sources of finance in Laputta Township.

3.1 Role of Agricultural Finance in Myanmar

Myanmar is an agricultural country and agriculture sector is the main stream 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. 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.

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.

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 Form7 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 rely on such loan due to lack facility of access to adequate formal credit.

3.2 Background Information of Laputta Township

Laputta Township is situated in the Ayeyarwaddy Region and it is located in the delta of the Ayeyarwaddy. The main business of Laputta township is agriculture and farming. Transportation system is well developed in Laputta township and usually use by road and water way. The main product of Laputta township is Paddy and which is distributing to the whole country. The types of paddy that cultivating in Laputta township are Sin Thwel Latt, Ma Naw Thu Kha, Paw San Yin, Mee Tone and Nga Sein. Laputta 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.

Geographic Condition of Laputta Township

Laputta Township is located between 15° 40' and 16° 23' N latitude and 94°33' and 95°9' E longitude. It is 23.2 miles long from East to West and 36.063 miles long from North to South. The total area is 1,160 square miles. It is comprised with the total number of 17 Wards and 65 Village groups. It is surrounded on the east by Bogale township, on the south by the Andaman Sea, on the west by Nga putaw Township and on the north by Myaungmya, Wakema and Mawlamyinegyun township. The regional map of Laputta Township is stated at appendix.

As it is in the delta region, there are many river and streams flowing in the township. The average temperature is 39°C and the annual rainy day within the year 2017 is 125 days with the total rainfall of 123.15 inches. Since, Laputta township is situated near the Bay of Bengal, it is often affected by the natural disaster. It was affected by cyclone Nargis in 2008 and cyclone Tsunami in 2014 (Township General Administration Department, 2017).

Demographic and Economic Condition of Laputta Township

The total population of Laputta Township is 330,478 which consisting 174,324 males and 156,154 females. The majority of the people are living in rural area and with

only (14%) of the total population are living in urban area. The Laputta is one of the delta region and economic developed city.

The majority of the people, nearly 47% of the total population, in this region are doing the agricultural business, livestock and fisheries business and salt production businesses. The major business and products of the Laputta Township are rice, paddy, fishery products, salts, coconuts and betel nuts and all of those products are distributing to the whole country including Yangon and upper regions by using different ways of transportations routes.

As Labutta township is flat plain region and shallow part of the sea, network of rivers and streams are commonly found in this township. The condition of forest coverage in Labutta Township is 12.56%. The total land area within the Laputta Township are 742,399 acres and 47% of total land area (348,972 acres) are arable land areas. Agricultural is the major business of the city and the major crops and agricultural products are paddy, beans, sesame, sunflowers, cottons, sugar cranes and corns.

According to the statistical data, Laputta is one of the highest yield cultivated region in Ayeyarwadddy District. By referring the data collect from the Department of Agricultural at Laputta Township (2018), the total number of farmers who doing farming business in Laputta Township are 21,743 during the year of 2018. The cultivated acres are 336,463 acres for the period of July 2018. The other businesses are livestock and fishers, salts production and other seasonal crops productions.

3.3 Credit Accessibility of Farmers in Laputta Township

Although there are many sources of the finance for the farmers within the Laputta Regions, there are some of the difficulties for the farmers. The credit amount that they can access is not much enough for using their farming requirement. Most of the farmers are lower level of education and they did not know much about the fund management that they obtained. Another point is that the farmers who do not have farming permit Form-7 cannot access to the formal credit channels. They can only choose the informal credit channel to support the fund need for the inputs of their farming business.

Laputta is well business-developed city and therefore there are many formal financial institutions which are providing the necessary fund support for the local business such as private banks, government banks, micro finance and other non-profit organizations for fund and technological supporting.

Since the agricultural is the major business of the city, the financial support for the agricultural business become as a crucial. Currently, Myanma Agricultural Development Bank (MADB) and other micro finance institutions like PACT Global, Proximity and Lead, are providing financial services and credit to the farmers in Laputta regions. However, some of the struggles still exist between the farmers and financial supports such as demand and supply of the credit and credit requirement and conditions. Therefore, farmers need to get the credit from the informal sources with high interest rates in order to fulfill their agricultural requirement. By getting the credit with high interest rates, that can effect upon the amount of profitability which in turn to cause the slow down the development of the agricultural sector.

Financial Sources in Laputta Township

The different sources of the financial institutions are providing the necessary fund for the farmers for their farming businesses. Among them, MADB bank offers credit within best of the interest rates for the farmers in order to support the development of the farming business that is the backbone of the country. Other financial sources, such as PACT Global and Proximity, they are also providing the credit requirement of the farmers with fair interest rates, which cannot be burden for the farmers. Other financial supporting organizations are Mercy Crops and Mya Sein Yaung Projects.

Myanmar Agricultural Development Bank (MADB)

MADB bank is offering the agricultural credit to the farmer with the interest rate of 8% per annum. The farmers can apply the credit twice for the year (Winter Season and Monsoon Season). The amount of credit is 150,000 Kyats per acre and the maximum amount that the farmers can receive is only for 10 acres, which equal to 1,500,000 Kyats. Currently, MADB provide the credit to nearly 18,000 farmers in Laputta region. During the fiscal year 2017-2018, MADB provided 16,338.45 Million Kyats credit for the Monsoon Season in Laputta region.

Farmers have to submit a loan application and also need to provide Form -7 as collateral to MADB for the agricultural credit process. MADB is providing not only for short-term credit but also for long-term credit that take a form of two-steps loan from JICA and MEB bank. Those types of loan are aiming for purchasing the modern machines for the business and long term investment projects.

Table 3.1 Seasonal Loan Condition in Laputta Township

Year	Monsoon Loan			Winter Loan		
	Number of Farmers	Acres	Amount (Kyats in Million)	Number of Farmers	Acres	Amount (Kyats in Million)
2015-2016	12119	107044	16055.59	1358	11900	1780.09
2016-2017	13210	118096	17714.40	1480	13237	1985.65
2017-2018	13007	108923	16338.45	-	-	-

Source: MADB in Laputta Township (2018)

Farmers need to deposit 30% of total amount that they apply for another type of loan (two-steps loan) and the interest rate will remain 8% per annum. The credit term is 3 years' term and 5 years' term. The other requirements for that kind of credit are two grantors, collateral such as house or land and taking the possession of machine or assets as collateral until the credit term is finished. However, there are not too many farmers who apply to that type of credit. Currently, there are only two cases of credits for MADB two-step loan until the end of the 2018. The reason for less amount of taking the loan is that the farmers do not have a sufficient amount for collateral and 30% deposit of the total amount that they apply. Table (3.1) shows the seasonal loan condition in Laputta township.

Rural Development Department

Apart from the above institutions, Livestock and Irrigation and Rural Development Department under the Ministry of Agriculture has operated Mya Sein Yaung Project (MSY, also known as Evergreen Village Development Program or Green Revolution) in Laputta Township. They are providing the supporting for the farmers for

the agricultural development and provide the agriculture loan with the interest rate of 6% to 18% per annum. They also provide farming technique, requirement of the modern machines for agri- business and cash management methods for the farmers. They also create the linkage between the suppliers and market for the farmers.

Microfinance Institutions

PACT Global and Proximity are the microfinance institutions that offer the agricultural credit to the farmers in Laputta Township. The credit term will be 6 months of periods with 30% interest rate per annum. The strong point that compare to the MADB credit is their marketing technique. They go directly to the villages and provide their services without need to come to the office and they provide not only to the farmers who own the farm but also to the farmers who are doing farming business by leasing from the others. However, they collect the interest for credit every fourteen days. The credit limit for the farmers who own the farm is 150,000 Kyats per acres and the maximum limit is 750,000 Kyats. They also need to provide original copy of Form -7 as collateral. The one who are doing the business with leasing farm need to provide the recommendation letter from the regional office, agreement from the owner of the land and the MFIs also collect the historical data of the applicant. The credit amount is only maximum 500,000 Kyats for those types of applicant.

They also provide Agriculture machine lease loan, which is similar to MADB two-step loan. Not only providing the credit services but also providing the training for the farmers. They often arrange 5 days training relating with Microfinance and Agricultural Technique. Also, the respective regional credit officers are conducting on-site visit to the credit disbursements field within one month after credit disbursement whether the farmers are effectively use the credit for their agricultural credit or not.

Informal Credit Sources

Farmers who cannot access to the formal credit channels are taking the loan from the informal sources such as relatives, friend and moneylenders. According to the survey result, the main reason that they cannot access to the formal credit channel is because of the requirement of Form-7. The cultivate land which they are doing their farming business do not attain to get the permit from the government. All of the formal credit

channels are only providing the credit to the ones who have the Form-7, a farmland work permit certificate for people with the right to farm a particular plot of land. When they need to take the credit for their farming activity, they can only take that require amount of credit with high rates of interest from informal sources such as relatives, friend and moneylenders. They have to pay approximately 20% of cumulative interest per monthly with or without collateral such as house, automobile and other assets to the moneylender. When the credit term is taking so long they cannot pay back not only interest but also principle to the moneylenders and also loss their property.

CHAPTER IV

ANALYSIS ON SOURCES OF FINANCE AND LOAN UTILIZATION OF FARMERS

This chapter explains and outlines the methodology that will be used in achieving the objectives of the study which were to establish the analysis on the sources of finance and loan utilization of farmers in Laputta Township. The following subsections are included in this chapter: research design, target population, data collection instruments, data collection procedures and finally data analysis.

4.1 Research Design

This research study used a descriptive approach on the relationship between the loan utilization of farmers and the farms performance with reference to the farmers in Laputta Township. 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.

Considering the size of the population, two-stage random sampling method is used to collect the primary data. There are (65) group of villages in Laputta Township. Among them six groups of villages (10%) of were selected from Laputta Township, such as Kyauk Mhaw, Nyaung Lein, Laputta South, Laputta North, Sar Kyin and Kyaunk Phyu (Pain Hnae Kone). The data was collected from 10% of total households from each of the selected group of villages in Laputta Township, Ayeyarwaddy Division.

In order to collect data, the borrowers from the Laputta township were asked to cooperate by filling the questionnaire. Their answers for the questions reflect different characteristics of the customer towards the identify the different sources of finance and effectiveness of the Agriculture loans utilization of farmers which is the main focus of the study. The respondents were chosen on the basis of simple sampling method for every stages. 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 Laputta township in such a limited time and with limited resources. A sample of 120 farmers were taken for the test and the respondents were approached individually.

Table (4.1) Sample Household Size

Village	Number of Farming Household	Sample of Household
Kyauk Mhaw	120	20
Nyaung Lein	250	23
Laputta South	181	22
Laputta North	175	18
Sar Kyin	134	15
Kyaunk Phyu	180	22
Total	1040	120

Source: Survey Data (2018)

4.2 Background Characteristics of Respondents

The first section in this study analyses the background characteristics of respondents. The characteristics of respondents are divided into two categories: demographic characteristics and economic characteristics.

Demographic Characteristics of Respondents

Demographic characteristics of respondents are firstly analyzed. They are gender, age, education level, and household size and year of farming which are shown in Table (4.2).

According to the Table (4.2), gender ratio of the formal loan borrower is 90:10 and informal loan borrowers is 24:76. On the age of the respondents, the study found that the majority of the respondents 28% of the respondents were above 45 years for formal loan borrowers. As for informal loan borrowers, the majority of the respondents, 29% of the respondents were age between 41-45 years. The age distribution of the second highest informal loan borrowing farmers is from 36-40 years as 24% of the respondents.

Table (4.2) Demographic Characteristics of Respondents

Characteristics	Formal Loan Borrowers		Informal Loan Borrowers	
	Number	Percent	Number	Percent
Gender				
Male	89	89.9	5	23.8
Female	10	10.1	16	76.2
Age (Year)				
25-30	12	12.1	3	14.3
31-35	18	18.2	4	19
36-40	19	19.2	5	23.8
41-45	22	22.2	6	28.6
Above45	28	28.3	3	14.3
Education Level				
Primary	57	57.6	10	47.6
Middle	36	36.6	10	47.6
High	6	6.1	1	4.8
Household Level				
2-4	54	51.6	11	52.4
5-7	45	48.4	10	47.6
Farming Experience (Year)				
<10 Years	24	24.2	6	28.6
10-15	24	24.2	5	23.8
>15 years	51	51.5	10	47.6

Source: Survey Data (2018)

Regarding the education level, most of the farmers are only primary level of education which indicated 57.6% of total formal loan borrowing respondents and 47.6% of informal loan borrowing respondents. 38.3% were secondary education level and only the last 5.8% of the respondents were high school level of education.

As for the household levels, most of the respondents 52% is 2 to 4 family members and 48% of the respondents have 5 to 6 family members for both of the formal and informal loan borrowing respondents.

Half of the borrowers have more than 15 years of farming experience. Moreover, one-fourth of formal loan borrowers have 10-5 years and less than 10 years of farming experience respectively. For informal loan borrowers, more than half of the respondents have less than 10 years of farming experience (2.4%) and the rest of the respondents have more than 15 years of farming experience. (47.6%).

Economic Profile of Respondents

The economic profile of respondents is studied according to their annual household income, main source of earning, cultivated acre and yield per acre.

Annual Household Income

Table (4.3) shows annual household income of the formal loan borrowers and informal loan borrowers. According to the survey results, annual household income of formal loan borrowing farmers from 4900,000 to 6000,000 Kyats are the smallest percent.

Table (4.3) Annual Household Income

Annual Household Income (Kyats Lakh)	Formal Loan Borrowers		Informal Loan Borrowers	
	Number	Percent	Number	Percent
15-24	8	8.1	14	66.7
25-36	82	82.8	7	33.3
37-48	7	7.1	-	-
49-60	2	2.0	-	-
Total	99	100	21	100

Source: Survey Data (2018)

Most of the formal loan borrowing respondents earn 2500,000 to 3600,000 Kyats which shows nearly 83%. For the informal loan borrowers, more than 60% of the respondents earn within the amount of 15000,000 to 2400,000 Kyats. The rest of the informal loan borrowing respondents have the annual household level within 2500,000 to 3600,000 Kyats.

Main Source of Earning

The classification of the main source of earning are farming, government employee, general workers and merchant. Since the main business of the majority respondents is the farming business, their main sources of earning are coming from the farming activity.

According to Table (4.4), most of the respondents are doing the farming business as their main source of earning which shows 90% of formal loan borrowing farmers and 76% of informal loan borrowing farmers. The remaining are government employee, general workers and merchant respectively.

Table (4.4) Main Sources of Earning

Main Source of Earning	Formal Loan Borrowers		Informal Loan Borrowers	
	Number	Percent	Number	Percent
Farming	89	89.9	16	76.2
Government Employee	8	8.1	2	9.5
General Workers	-	-	3	14.3
Merchant	2	2	-	-
Total	99	100	21	100

Source: Survey Data (2018)

Cultivated Acre (Paddy)

According to the study result, the minimum cultivate acre of the respondent is 1 acre and maximum cultivate acre is 12 acres for the formal loan borrowing respondents. As for the informal loan borrowing respondents the minimum cultivate acre is also 1 acre and the maximum cultivate acre is 5 acres.

Most of the formal loan borrowing farmers cultivated 4-6 paddy acres as 44.4% of the respondents. The cultivated paddy acres of 7-9 acres and 10-12 acres are followed by second and third position as 38.3% and 10.1% respectively. At least, 7.2% of the formal loan borrowing respondents have 1-3 paddy cultivated acres. For the informal loan borrowing farmers, 1 to 3 cultivated acres are the highest response with 66.7%. The remaining are cultivating 4 to 6 paddy acres. The cultivated acres of the respondents are described in Table (4.5).

Table (4.5) Cultivated Acres of the Respondents

Cultivated Acres (Paddy)	Formal Loan Borrowers		Informal Loan Borrowers	
	Number	Percent	Number	Percent
1-3	7	7.2	14	66.7
4-6	44	44.4	7	33.3
7-9	38	38.3	-	-
10-12	10	10.1	-	-
Total	99	100	21	100

Sources: Survey Data (2018)

Paddy Yield Per Acre

The range of the paddy yield per acre of the respondents are within 40 -80 bushels. The following table shows the paddy yield per acre of the formal loan borrowing respondents which is within the range 40-80 bushels and the paddy yield per acre range of informal loan borrowing respondents, the range within 40 –55 bushels.

Table (4.6) Paddy Yield Per Acre of Respondents

Paddy Yield Per Acre	Formal Loan Borrowers		Informal Loan Borrowers	
	Number	Percent	Number	Percent
<45	3	3.0	6	28.6
45-55	7	7.2	15	71.4
55-65	19	19.2	-	-
65-75	47	47.4	-	-
>75	23	23.2		
Total	99	100	21	100

Sources: Survey Data (2018)

Majority of the formal loan borrowing respondents produce within 65-75 bushels per acre and informal loan borrowing respondents produce within 45-44 bushels per acres. Therefore, this shows that the paddy yield per acre of formal loan borrowing farmers are more than that of informal loan borrowing farmers. All of these results are described in Table (4.6).

4.3 Credit Accessibility of Respondents

This section is the detail analysis of the credit accessibility of respondents, thereby credit accessibility is measured by sources of finance, amount of loan borrowed, interest rate, period of loan received and loan coverage percent.

Sources of Finance

As discussed at previous chapters, farmers are getting and accessing loan from the different financial institutions and sources. These sources can be classified as formal and informal channels and this section focus on discussed about the major sources of finance of the respondents.

Table (4.7) Sources of Finance for Farmers

Sources of Finance	Formal Loan Borrower		Informal Loan Borrowers	
	Number	Percent	Number	Percent
MADB	99	100	-	-
Cooperative/MFIs	30	30	-	-
Mya Sein Yaung Project	21	21	-	-
Friends and Relatives	-	-	10	47
Money Lender	-	-	8	38
Pawn Shops	-	-	3	15

Sources: Survey Data (2018)

According to Table (4.7), all of the formal loan borrowing farmers borrowed from MADB and some of the farmers took loan also from the other formal financial institutions. MADB is the major sources of finance and other cooperative and MFIs, Pact Global, Mercy Crops and Proximity are standing as the second sources of finance in the study area. 21% of the respondent also access to the loan from the Mya Sein Yaung Project.

Most of the farmers who cannot access to the formal loan borrowing channels took loan from their friends and relatives and money lenders. The small percent,15% of the informal loan borrowers took the loan from the pawn shops.

Loan Amount Received from Different Sources of Finance

Farmers can access to the different sources of financial institutions for the agricultural credit requirement in Laputta Township. Most of the formal loan borrowers borrowed from MADB and in addition some of the farmers also borrowed from the loan from other organization. As described in the previous chapter, MADB bank lends the seasonal loan at the minimum amount of 150,000 and the maximum amount of 1500,000 for ten acres. Table (4.8) shows the amount of loan borrowed from MADB, other formal institutions and informal lenders which is divided depending on the cultivated acres.

According to the survey data, 44.4% of the formal loan borrowers received 450,001 to 900,000 Kyats and 38.3% received loan amount of 900,001 to 1350,000. One fifth of the farmers borrowed the maximum amount of 1,500,000 Kyats and the rest 7.2% borrowed minimum amount of 150,000 to 450,000 with the interest rate of 8% per annum from MADB bank.

Table (4.8) Amount of Loan Received

Loan Amount (Kyats)	MADB		Other Financial Institutions		Informal Lenders	
	Number	Percent	Number	Percent	Number	Percent
<450,000	7	7.2	7	14	21	100
450,001-900,000	44	44.4	44	86	-	-
900,001-1,350,000	38	38.3	-	-	-	-
1,350,000-1,800,000	10	10.1	-	-	-	-

Source: Survey Data (2018)

The other formal institutions offer the loan 150,000 Kyats par acre which is same as MADB however the maximum amount of loan they offer is 750,000 for agricultural loan. The amount of loan received from the other organization includes cooperative, MFIs and Mya Sein Yaung Projects. The interest rates charges by these financial institutions are 18% and 30% respectively which is greater than that charged by MADB.

Informal loan borrowers are taking the loan with high interest rate. However, the amount of loan that they can access from informal loan lenders is relatively small amount compare to the formal institutions. According to the survey results, the informal loan

borrowers received only the amount of less than 450,000 Kyats from the different informal sources.

Period of Loan Received

Loan received period is also important for the farmers for doing their farming activities on time. Farmers utilized the funds received from the timely available sources of finance for their farming business activity. If the required funds are received on time, they can invest those fund to consume productive inputs and which in turn can have the effect upon the increase of the quality and quantity of their farm output. The analysis about the period of loan received is also conducted for both formal and informal loan borrowers. Table (4.9) shows the result of the respondent's answer about the period of their loan received.

Table (4.9) Period of Loan Received

Period of Loan Received	Formal Loan Borrowers		Informal Loan Borrowers	
	Number	Percent	Number	Percent
Farming Period	51	51.5	21	100
After Farming Period	48	48.5	-	-
Total	99	100	21	100

Sources: Survey Data (2018)

The survey found that the period of loan received from formal loan sources is almost equal between farming period and after farming period. As for the informal loan borrowers, most of the respondents received loan during farming period. All the informal loan borrowers received loan during their farming period.

Loan Coverage

The amount of loan received for the agricultural credit is not cover enough for the farming business especially for the spending upon the productive inputs and advance technological machinery. As a result, it can affect upon the technological development in the farming business and also for the output level. The detail analysis is conduct about the loan coverage percent of the respondents and the results are shown in the following table (4.10).

Table (4.10) Loan Coverage

Loan Coverage (%)	Formal Loan Borrowers		Informal Loan Borrowers	
	Number	Percent	Number	Percent
40	1	1	20	95.2
50	16	16	1	4.8
60	46	46	-	-
70	36	37	-	-
Total	99	100	21	100

Sources: Survey Data (2018)

According to the survey result, 46 respondents of the formal loan borrowers answered the loan amount that they received is only 60% cover for the farming activity. 36 respondents of the formal loan borrowers replied that the loan coverage percent is 70% and 16 respondents replied that the loan coverage percent is 50%. It can be seen that although there are many sources of formal institutions are providing the fund need for the agriculture business, the loan amount that the support for the farming business are not enough for the farmer to fully consume for their business activity. It can lead to the limitation upon the increase in productivity and invest in value added activities.

Constraints for Accessing Agricultural Loan

There are some constraints for the borrowing of agricultural loan such as interest rate, documents required, waiting time and travel distance. Therefore, the detail study is conducted about the constraints for the agricultural loan for both types of borrowers. The analysis is conducted about ease of getting loan, time spend upon application process and interest rate. The detail conditions are shown in Table (4.11).

Nearly 85% of the respondents replied that it is easy to getting the loan from the different sources of finance. As for loan application process time, there is no time to wait to get loan from the informal sources of finance. However, as for the formal loan borrowers, half of the respondents replied that they have to spend more than half of the day for the loan application process. While analyzing the fairness of the interest rate all of the formal loan borrowers replied that the interest rate is fair and all of the informal loan borrowers replied that the interest rate is too high.

Table (4.11) Constraints for Accessing Agricultural Loan

Factors	Formal Loan Borrowers		Informal Loan Borrowers	
	Number	Percent	Number	Percent
Ease of Access to Credit				
Easy	80	80.8	21	100
Difficult	19	19.2	-	-
Loan application process time				
Half of Day	51	51.5	21	100
More Than Half of Day	48	48.5	-	-
Interest Rate				
Fair	99	100	-	-
High	-	-	21	100

Source: Survey Data (2018)

While analyzing the credit accessibility of the farmers, it found out that some of the farmers who still do not have the land use certificate cannot access to the formal sources of finance. Therefore, the reason of the lack of accessing to the formal loan channel become one of factors to study. Therefore, the analysis upon the limitation of access of formal loan is conducted which include the factors such as lack of farmland owned, insufficiency of the required documents, recorded as credit default at financial institutions.

Table (4.12) Reason of Lack of Consuming the Formal Loan

Factors	Informal Loan Borrowers	
	Number	Percent
Insufficiency of Required Documents	16	76.2
Lack of Farmland Owned	3	14.3
Credit Default History	2	9.5
Total	21	100

Source: Survey Data (2018)

According to the survey results, 76.2% of the respondents replied that they do not have sufficient document to apply the loan at the financial institutions such as land use certificate. Furthermore, 14.3% of the respondents answered that they do not own the

farmland and the rest 9.5% answered that they have credit default history at financial institutions.

4.4 Sources of Finance and Loan Utilization of Farmers

This section focuses on how farmers are using the loans from different sources of finance upon their farming activity. Table (4.13) shows the detail information of the uses of loan by formal loan borrowers and informal loan borrowers.

Table (4.13) Sources of Finance and Loan Utilization of Farmers

Variables		Formal Loan Borrowers		Informal Loan Borrowers	
		Number	Percent	Number	Percent
Purchase of productive Seeds	Moderate	14	14	-	-
	Great	71	72	17	81
	Very Great	14	14	4	19
Labor Hiring Cost	Moderate	11	11	-	-
	Great	78	79	18	86
	Very Great	10	10	3	14
Modern Equipment Rental Fees	Moderate	9	9	21	100
	Great	83	84	-	-
	Very Great	7	7	-	-
Purchase of Fertilizer	Moderate	14	14	-	-
	Great	72	73	17	81
	Very Great	13	13	4	19

Source: Survey data, 2018

According to the study results, both formal and informal loan borrowers are using the loans with great extent to purchase the productive seeds, to use upon labor hiring cost and to purchase the fertilizers. However, informal loan borrowers cannot effort to use the funds for the purpose of farming machinery hiring fee. This is because the loan amount that they can get from the informal sources is not sufficient enough to cover the cost of machinery rental fees. As for the formal loan borrowers, they can use the loan with great extent for the purpose of machinery hiring fees. According to the previous studies of Jackson Opati Eckoka, June 2010), it is stated that the effect of using high technology

machine at farming business can have the improvement of the quality and quantity farm products. By using the high technology machine, the production time become lesser and the quality of the products become higher.

4.5 Loan Utilization and Farm Performance of Farmers

This section includes the analysis of the loan utilization and farm performance of farmers with the measurement related with loan utilization of formal and informal loan borrowers, relationship between independent variables and paddy yield and regression analysis on farm performance.

Analysis of Loan Utilization Factors

The main purpose of the input cost on farming as considered in the present study are purchase of productive seeds, manure and fertilizer insecticides, hire charge for human labor and charge for hire cost of tractor and harvesting machine. The detail result of the study on loan utilization of farmer is given in the following table.

Table (4.14) Analysis of Loan Utilization Factors

No	Loan Utilization Factors of Farmers	Mean	Standard Deviation
1	Loan amount is used for purchase of productive seeds	4.03	0.517
2	Loan amount is used for labor hiring	4.02	0.449
3	Loan amount is used for farming machinery rental fee	3.98	0.366
4	Loan amount is used for purchase of fertilizers	4.02	0.510
	Overall Mean	4.01	

Source: Survey data, 2018

Table (4.14) indicate that among the various items of loan utilization, almost all respondents used the loan for farming machinery rental fee with mean value of 3.98 and loan is also used for purchase of fertilizer that represents with mean value of 4.02. Moreover, loan amount is utilized for labor hiring with mean value of 4.02 and purchase of productive seeds with mean value of 4.03 which is most of the respondents agree them.

4.6 Regression Analysis on Farm Performance (Paddy Yield)

This section focuses on estimating how the independent variables influence the dependent variable. Model Summary shows that a linear relationship between the independent variables which in this case were amount of loan received and average of loan utilization factors (purchase of productive seeds, farm machinery rental fee, purchase of fertilizer, hired labor) and dependent variable which was prescribed by paddy yield per acre. The adjusted R square value of 0.546 is indicated in model summary table. This could be interpreted that the variation of the independent variables used in this study are able to explain 54.6% of the variations in dependent variables. F value of 72.657 is strong significant at 1% Level.

The analysis of the variance to test the significant of the regression model as pertains to the difference in means of dependent and independent variables is shown in Table (4.15).

Table (4.15) ANNOVA of Independent Variables and Paddy Yield per Acre

	Model	Sum of Square	df	Mean Square	F	Sig
1	Regression	9198.397	2	4599.198	72.657	.000
	Residual	7406.103	117	63.300		
	Total	16604.500	119			

The following Table (4.16) describes the regression results among dependent variable (Paddy Yield per Acre) and independent variables the amount of loan received and the average of loan utilization factors (purchase of productive seeds, labor hiring cost, farming machinery hiring fees and purchase of fertilizers).

Results obtained from linear regression analysis show that all the variables are positively and significantly related with Yield per Acre at 1% significant level. An increase of one unit of average of loan utilization factors (purchase of productive seeds, labor hiring cost, machinery rental fees and purchase of fertilizer) can increase the farm productivity by 15.3 units while amount of loan received remain unchanged. One-unit increase of the amount of loan received can increase the farm productivity by 1.553 units while average of loan utilization factors remains unchanged. They are positively related

with paddy yield per acre and it can explain that increase in use of loan utilization and amount of loan received will improve the farm performance (Yield Per Acre).

Table (4.16) Relationship Between Loan Utilization and Farm Performance (Paddy Yield Per Acre)

Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig
	B	Standard Error	Beta		
(Constant)	-10.841	7.297		-1.486	.140
Average of Loan Utilization	15.300	1.825	.525	8.385	.000***
Amount of Loan Received	1.553	.000	.449	7.169	.000***
R Square = 0.554, Adjusted R Square = 0.546, F=72.657					

Source: Survey Result (2018)

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

CHAPTER V

CONCLUSION

This chapter describes conclusion of the study area of sources of finance and loan utilization of farmers and its effect on their productivity. This chapter includes finding and recommendations and suggestion for further research of the study.

5.1 Findings

Agriculture is support to be the main business of Myanmar. Majority of the farmers in rural area are directly or indirectly concerning with the agriculture. However, most of the famers in Myanmar are small scales and landless marginal. They always require funds to run their various production activities relating to the agriculture production. Adequate funds to use upon the necessary inputs for the farming business has greater extent to meet up the huge cost of producing agricultural commodities. It always has been important to improve the productivity and to become the industrialized agriculture.

According to the study on the background information of the respondents in studying region, most of the farmers fall within the age level of above 45 years old. More than half of the farmers are primary education level. The household size of the respondent is from 2-7 members. Duration of their farming experience is more than 15 years, most of their main business is faming business and most of their incoming are coming from agriculture business. The cultivated acre is 11 acres' maximum and 1-acre minimum. The average paddy yield per acre is round about 65 bushels per acre.

MADB and other Cooperative and microfinance associations are offering their best support to fulfil the fund requirement of agricultural business. Concerning to the credit accessibility, nearly one-fifth of the respondents cannot access to the formal financial institutions and they are relying upon the informal money lenders because they do not have the farming permit which is the compulsory requirement to access the loan from the formal financial institutions. The rest of the respondent are accessing to the loan offering by the formal financial institutions and the main sources of the finance of all of them are MADB. The amount of loan providing from the MADB is depending upon the cultivate acre that the loan applicants have. Almost all of the farmers replied that loan amount received from the both of the formal and informal channels are not sufficient.

Nearly half of the respondent answered that they received loan after farming period from MADB. More than one-third percent of the respondents responded that it is easy to get the loan from formal financial institutions and only 19% of the respondents replied that it difficult to get the loan. All the farmers who taking the loan from the informal money lenders replied that it is easy to get the loan at any time.

The results from analysis of sources of finance and loan utilization show that both of the formal loan borrowers and informal loan borrowers can use their loan with great extent for the purpose of purchase of productive seeds, fertilizer, hired labor. On the other hand, informal loan borrowers can moderately effort to consume the high technology machine because of the insufficient of funds. That become one of the reasons of lesser yield productivity compare to the formal loan borrowers.

According to the analysis, it found out that average of loan utilization factors (purchase of productive seeds, hiring labor cost, farming machinery rental fees and purchase of fertilizer) and amount of loan received have a positive effect upon the performance of farm (Yield per Acre). By increasing each of the unit of the independents variables can also increase the farm productivity. Sufficient fund and effective use of the loan improved high paddy yield with high quality. High quality products get the high prices in the market and which in turn create the increase of the profitability.

5.2 Suggestions and Recommendations

Currently, MADB is providing the seasonal agricultural loans to the famers and accepting the loan application only after they have been fully repaid the previous season loan borrowed by the members of village. They set the loan limit based on the cultivated acres and the amount is one hundred fifty thousand kyats per acre and maximum is one million five hundred thousand kyats. Eventually, the loan amount provided per acre is not sufficient enough to cover for their farming business expenses and to access the modern technology. That become the constraint to lead to the industrialized agricultural business.

MADB should be considered to extend the loan amount needed by the farmers as much as possibly based on MADB's working capital. At present, there are not much private banks are involved in the agricultural financing within Laputta Region. The formal sources of finance need to develop the sound tracking system to monitoring and supervising the loan utilization upon the right purposes. The agricultural sector can be more active when both of the private and public organizations are actively support upon

the fund needs. While lots of fund injected to the agricultural industry, farmers can raise amount of productive investment. Which in turn, gradually effect upon the type of technology used and the scale of operations that the farmers can adopt for their farms. It can be lead to the increase in productivity of qualified products.

5.3 Needs for Further Research

This study is only cover for the loan utilization and its effect upon the farm's performance in Laputta Township, Ayeyarwaddy Region and only consider upon the paddy production. Therefore, it may not be reflected to entire situation in Myanmar. It is due to the time constraints to conduct more areas in the study area as well as to collect more randomly selected farers.

Further studies should be conducted in all the other areas in Myanmar and thus give conclusive recommendation for the countrywide. As for the last, further study should also be done upon the factors affecting the development of the agricultural sector.

REFERENCES

1. Awotide, B.A, Aboulaye, T, Alene, A, and Manyong, V.M. (2015), “*Impact of Access to Credit on Agricultural Productivity: Evidence from Smallholder Cassava Farmers in Nigeria*”, Contributed Paper Prepared for Oral Presentation at the Internal Conference of Agricultural Economics (ICAE), Milan, Italy, P1-3.
2. Fred, Mugambi and Olive, M, Kemirembe (2015), “*The Role of Financial Literacy on Loan Repayment Among Small and Medium Entrepreneurs in Rwanda : Case Study of Urwego Opportunity Bank*”, Jomo Kenyatta University of Agriculture and Technology.
3. Jackson, Opati Echoka (2010), “*Analysis of Determinants of Agricultural Credit Performance in Kenya*”, Department of Agricultural Economics, The University of Nairobi.
4. Jakline, Waither Irungu (2013), “*Relationship between Agricultural Credit Financing and Financial Performance: A Case Study of Small Scale Farmers in Kira Division in Muranga Country*”, Department of Master of Business Administration, School of Business University of Nairobi, P 37-39.
5. Klerx, Same (2015), “*Alternative Sources of Finance in the Agricultural Sector*”, Business Economic Group, Wageningen University.
6. Lizzen, Moono (2015), “*An Analysis of Factors Influencing Market Participation Among Smallholder Rice Farmers in Western Province of Zambia*”, Department of Science in Agricultural and Applied Economics, University of Nairobi.
7. Lotita, Y, Poliquit (2006), “*Accessibility of Rural Credit Among Small Farmers in the Philippines*”, Department of Rural Development, Massey University, Palmerston North, New Zealand.
8. Muhongayire (2012), “*An Economic Assessment of the Factor Influencing Smallholder Farmer’s access to Formal Credit: A Case Study of Rwamagana District, Rwanda*”.
9. Munuo, Catherine (2013), “*Agricultural Financing Initiatives in Developing Countries*”.

10. Nilar Win, MADB Bank (2013), *“Experiences of Myanmar Agricultural Development Bank Program”*.
11. Robert, A, Amoah (2016), *“Assessing the Level and Impact of Financial Literacy on African Americans”*, Department of Management and Technology, Walden University.
12. Sarhad, J, Agric (2008), *“Impact of Agricultural Credit on Farm Productivity and Income of Farmers in Mountainous Agriculture in Northern Pakistan, A Case Study of Selected Villages in District Chitral”*, Institute of Development Studies, NWEF Agricultural University Peshawar- Pakistan P 1-2.
13. Tanveer, Hussain, (2012) *“Factors Influencing Demand for Credit from Formal and Informal Sources in Gujranwala District, Pakistan, A Case of Commercial Banks and Arties”*, Department of International Environment and Development Studies (Norageric), Norwegian University of Life Sciences (UMB), P 16.
14. Township General Administration Department (2017) *“Information Related with Laputta Township”*, Laputta District General Administration Department, Ayeyarwaddy Division.
15. Win Naing (2017), Annual Report, *“Myanma Agricultural Development Bank: Agricultural Financing System”*, Yangon, Myanmar.
16. Wivine, Muhongayire (2012), *“An Economic Assessment of the Factors Influencing Smallholder Farmers’ Access to Formal Credit: A Case Study of Rwamagana District, Rwanda”*, Department of Agricultural Economic, University of Nairobi.

APPENDIX

Questionnaire for Sources of Finance and Loan Utilization of Farmers in Laputta Township

VILLAGE NAME

SECTION A : DEMOGRAPHIC INFORMATION

1. What is your gender?

Male []

Female []

2. What is your age?

3. How many people are in your household?.....(No of persons)

4. What is your level of education?

Primary []

Secondary []

College []

University []

Other []

5. For how long have been in farming?

6. What is the size of your farm?..... Acre

7. Yield per acre (Other Crops)

No	Season	Cultivate Acre	Yield per acre	Total Yield	Selling price per unit	Remarks
1	Dry Season					
2	Monsoon Season					

8. Yield per acre (Other Crops)

No	Season	Cultivate Acre	Yield per acre	Total Yield	Selling price per unit	Remarks
1	Dry Season					
2	Monsoon Season					

9. How much is your annual household income?

10. What is your main source of income?

Farming []

Government Staff []

General workers []

Others ----- []

**SECTION B : AGRICULTURAL CREDIT FINANCE AND PERFORMANCE
OF FARM**

For questions in this section, please answer to the best of your knowledge

11. The major source of agricultural credit that you obtained.

Agricultural Bank []

Micro Finance Institutions []

Informal Credit Sources []

Others ----- []

Formal Loan Borrowers

12. What is the amount of credit that you obtain at any given time?

.....

13. How often do you obtain loan for agricultural?

.....

14. What is the average interest rate charged on the agricultural loan?

.....

15. What is the repayment system?

Installment []

Lump Sum []

16. What type of collateral do you need to give?

.....

17. Do you get loan in timely? Yes [] No []

18. What is the waiting time for application process?

.....

19. Do you think to get the loan is difficult? Yes [] No []

20. What is the sufficiency percentage of loan?

.....

21. What is your average revenue generated on a monthly basis?.....(In Kyats)

22. What are your total costs incurred including interest expenses on credit granted?

..... (In Kyats)

Informal Loan Borrowers

23. What is the amount of credit that you obtain at any given time?

.....

24. How often do you obtain loan for agricultural?

.....

25. What is the average interest rate charged on the agricultural loan?

.....

26. What is the repayment system?

Installment []

Lump Sum []

27. Do you get loan in timely? Yes [] No []

28. What type of collateral do you need to give?

.....

29. What is the waiting time to get Loan?

.....

30. Do you think to get the loan is difficult? Yes [] No []

31. What is the sufficiency percentage of loan?

.....

32. What is your average revenue generated on a monthly basis?.....(In Kyats)

33. What are your total costs incurred including interest expenses on credit granted?

..... (In Kyats)

34. To what extent are you able to achieve each of the following essentials of factors by using the agricultural credit? (1= Not at all, 2= Little Extent, 3= Moderate Extent, 4=Great Extent, 5= Very Great Extent)

Factors	1	2	3	4	5
Productive Seeds					
Labor Cost					
Modern Technology Machine Rental Fees					
Fertilizer					

Laputta Township Map



Source: Google