

**YANGON UNIVERSITY OF ECONOMICS
MASTER OF DEVELOPMENT STUDIES PROGRAMME**

**A STUDY ON THE MADB LOANS FOR PADDY
DOMINANT AGRICULTURE PRODUCTION**

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EMDevS - 77 (14th BATCH)**

AUGUST, 2019

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AGRICULTURE PRODUCTION**

This thesis is submitted as a partial fulfillment to the requirements for the
degree of Master of Development Studies (MDevS)

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ABSTRACT

This study analyzes the impact of agricultural input subsidized by government and actual paddy production of farmers. The descriptive method is used base on both primary data and secondary data from Minister of Agriculture, Livestock and Irrigation of Myanmar in this thesis. It is found that MADB loans offer to farmers by government subsidies. There are six objectives on loans disbursing. These objective are to develop of agricultural, livestock and rural socio-economic enterprises in a simple procedure, to promote rural banking, to encourage saving habit in order to bring about it self-help spirit among rural population, to support socio-economic development in the rural area, to cultivate habit of using banking service and to develop banking business. MADB banks disburse loan by rule and regulation. Bank cannot offer to first priority to farmer's needs and cannot disburse individually to farmers. MADB first priority is to get most resettlement in every year. Bank disburse loans to village tract level. So MADB cannot disburse the loans to farmers with sufficient and right time. Most of farmers rely on local loans for cultivation cost.

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LIST OF ABBREVIATIONS

ADB	Asia Development Bank
ADLI	agricultural demand led industrialization
ASEAN	Association of Southeast Asian Nations
CBM	Central Bank of Myanmar
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
HYV	High Yield Varietriy
INGO	International Non-Government Organization
MADB	Myanmar Agricultural Development Bank
MAI	Ministry of Agriculture and Irrigation
MEB	Myanmar Economic Bank
MOA	Minister if Agriculture
NGOs	Non-Government Organization
OECD	Organization of economicco-operation and development
ROSCAs	rotating and non-rotating savings and credit associations
SCPL	Seasonal Crop Production Loan
TL	Term Loan
USAID	United States Agency for International development

CHAPTER I

INTRODUCTION

1.1 Rationale of the Study

The agricultural sectors in most of the developing countries play strategic role in economic development. International experience has led to a renewed focus on the agriculture sector as the engine for broad-based economic growth. Compared to any other sector within an economy, growth in agriculture productivity has been recognized to be pro-poor; having a direct role in raising real incomes of the rural poor, and thus reducing poverty. This implies that in a sector such as agriculture, which requires relatively high public investments, strategically formulated interventions and policies conducive to growth could significantly contribute to the overall poverty alleviation of a country. This is especially true in a country such as Myanmar where a major proportion of the population still live in rural areas.

Myanmar's abundant land, extensive labor resources and proximity to the major emerging food markets of China and India offer distinct competitive advantages for doing business. The country's diverse topography, water and ecosystems allow for producing a range of cereals, pulses, horticultural products and fruits, as well as livestock and fishery products. Agriculture is the backbone of the Myanmar economy. It is estimated that the agriculture sector represents between 35 to 40 percent of gross domestic product (GDP) and that up to 70 percent of the labor force (of 32.5 million) is directly or indirectly engaged in agricultural activities or depend on agriculture for their income. Cultivated land, covering 17.65 million hectares, has the potential to be increased by nearly 50%. For decades, the agricultural productivity has faced extensive government controls and underinvestment in the sector. The agriculture form the basic core of the national economy of Myanmar, around 70% of population reside in rural area and most of them are dependent on agricultural sector.

Moreover, it is estimated that agriculture products generate between 25 and 30 percent of total export earnings. Given agriculture's important contribution to the

economy, the modernization of the agriculture sector is a top priority in the economic and social development agenda of the Government of Myanmar. Hence, the governments tried to get higher production with short and long term plans using more budgets. But there are lowest yield rate and high labor cost. Labor wage is still low because farmers get low profit. Therefore seasonal labors migrate to urban area and that causes the labor shortage in rice production.

Myanmar has largest land area surface in ASEAN country. But Thailand and Vietnam are first and second world rice exporters. Now Myanmar rice production is stagnant and rural people are facing with low income. Myanmar has a long tradition of rice production. In the years immediately prior to World War II it was the largest rice-producing nation in the world, and it continues to be one of the ten largest rice-producing countries in terms of total yield. Traditionally, rice production occurred only as a monsoon crop in the rainy season. This had changed during the late 1970s and early 80s with the government-sponsored Whole Township Paddy Production scheme. But Myanmar has not received any significant official development assistance for nearly one and a half decades and there is now a serious investment gap in the rural economy. National investments in agriculture and its sub-sectors have been limited by a scarcity of domestic resources and have not always been based on solid feasibility work or underpinned by necessary policy changes. The result has been low productivity growth and increasing rural poverty in many rural areas.

Rice is the most important crop to millions of farmers and to some landless who derive their income from working as seasonal laborers. Moreover, rice is the staple food and also a leading earner of foreign exchange. Rice continue to play a central role in Myanmar's agriculture production and food consumption. Land, labor, and capital are the three main resources necessary for rice production. Land and labors are full. But, in capital, most of the farmers invest with loan to grow the rice. Although they get loan from Myanmar Agriculture Development Bank and local lender, there are still big issues.

1.2 Objective of the Study

The objective of the study is to analysis the effect of MADB loans to the farmers and to find challenges of financial and other requirements for paddy dominant agricultural production.

1.3 Method of Study

In this thesis, the descriptive method is used both primary data and secondary data, from Ministry of Agriculture, Livestock and Irrigation of Myanmar. A combination of qualitative and quantitative approach is applied to achieve the objective of this study.

1.4 Scope and Limitations of the Study

The study is focus on the MADB loan to farmers who grow rice in only monsoon season in Dedaye area and to find out issues and underlining causes to of the declining rice production and income of the farmers.

1.5 Organization of the Study

This study consists of five chapters:

Chapter (1) mentions introduction of the rationale, objectives, scope and limitation of the study and method of study. Chapter (2) presents description of literature review literature which covers theoretical how important agriculture to development of countries, Chapter (3) mentioned an overview of Myanmar Agriculture Development Bank, Chapter (4) Analyzing on MADB loan for rice production Chapter (5) Findings and Conclusions.

CHAPTER II

LITERATURE REVIEW

2.1 Agriculture, Growth and Poverty Reduction

The agricultural sector continues to play a crucial role for development, especially in low-income countries where the sector is large both in terms of aggregate income and total labor force. Agriculture play the main role in the development process and the interactions between agriculture and other economic sectors. Agriculture contributes to both income growth and poverty reduction in developing countries by generating income and employment in rural areas and providing food at reasonable prices in urban areas. The sector matters greatly in low-income countries where about 60 percent of the labor force is employed in agriculture: it accounts for 25 percent of GDP (but only 9 percent in middle-income and 1 percent in high-income countries). Of the 5.5 billion people who live in developing countries, 3 billion live in rural areas. Agriculture is the main source of livelihood for 86 percent of these rural households. Some 75 percent of poor people still live in rural areas and derive the major part of their income from the agricultural sector and related activities. Agriculture provides food, income and jobs and hence can be an engine of growth in agriculture-based developing countries and an effective tool to reduce poverty in transforming countries. Balancing agriculture and industry is an important though difficult dimension of development policy. Recently agro-pessimist views based on the observation that agriculture in developing countries is often the least productive sector have been voiced in the literature.

In developing countries that have experienced sustained increases in yields, the mode of agriculture has been intensive and has involved adoption of new varieties by farmers, irrigation and massive use of fertilizer with predictable environmental consequences which presupposes good institutions. In the coming decades massive productivity increases in Sub-Saharan Africa will be necessary if the subcontinent is to catch up with the rest of the world. The challenge is thus of a different nature than before. Further cropland expansion (which was the basis for the slow yield increases

that took place in the past), with a few exceptions, is really not possible. New seeds that are resistant to climate risks and adapted to local conditions will need to be developed and sustainable irrigation systems expanded. The most difficult challenges are institutional and economic. Often smallholders cannot internalize the benefit of their efficiency (compared with large farms) because of missing markets for insurance and credit, low education levels, limited market access and market information, and insecure property and usage rights. Hence, although new advances in R&D such as genetically modified organisms and extension services are important for future growth and poverty reduction, getting fundamental institutions right is a prerequisite for growth and an priority on the agricultural development agenda.

Non-farm employment is an important income source for the poor and an effective way out of poverty for rural households, as well as a means to cope with missing insurance and credit markets. However, while the rural non-farm sector is a source of additional employment opportunities and an instrument to reduce poverty, diversification of income by farmers does not necessarily guarantee upward mobility. In order for this to happen, proper education and information about and access to non-farm jobs are necessary. As a consequence, rural development programs have to incorporate such needs into their strategies. Past experiences have shown that private provision of certain goods and services can easily fail and therefore it is important to have an enabling state|| to orchestrate and initiate these activities without being their sole purveyor. Their implementation should take advantage of private sector initiatives and local civil society expertise. New approaches such as community-driven development can be successful in managing common resources and local projects. But the lesson from the past is that they fail in the absence of egalitarian preferences and social capital among community members. Balancing centralization and decentralization of program implementation a difficult undertaking is hence the key for successful rural development.

Insulating poor people from world food price swings and the elimination of trade barriers for developing country agricultural exports, in the context of the WTO trade negotiations, are both of utmost importance for the reduction of poverty in low income countries. Developed countries should reduce these trade barriers further as low-income country exports are mainly agricultural goods and these countries lose most from current protectionism. For the negotiations to succeed, this must go hand-in-hand with a reduction in trade barriers by developing countries. Price volatility and

beggar-thy-neighbor policies to stabilize prices and guarantee national food security by some countries during the 2008 food price crisis have harmed vulnerable and poor populations and reversed some past gains in the global effort to reduce chronic poverty. Trade and market interventions to stabilize agricultural prices have failed or met with very limited success. Even when unilateral policies have succeeded in stabilizing domestic prices, they have increased the volatility of international prices even more and this eventually leads to a vicious circle of similar responses by other countries. Because the main purpose of stabilization and food security policies is to mitigate the impact on the poorest income groups (those most affected by food price changes), the focus should be on mitigation and risk management strategies for these groups. There is evidence that some social safety net and insurance policies can offset agricultural price shocks and help poor households to prevent food insecurity and cope with idiosyncratic shocks to their income. However, the best instruments to protect small farmers from income shocks are ex ante measures, such as increased productivity that reduce the risk of shocks in the first place.

Developing economies have generally been described as dual economies with a traditional agricultural sector and a modern capitalist sector. Productivity is assumed to be lower in agriculture than in the modern sector. The canonical model was put forward by Lewis (1954) and subsequently extended by Ranis and Fei (1961). Lewis' model rests on the idea of surplus labor existing in the agricultural sector. With lower productivity in agriculture, wages will be higher in the modern sector, which induces labor to move out of agriculture and into the modern sector, which in turn generates economic growth. Other precursors, such as Schultz (1953), also point out the importance of food supply by the agricultural sector. In Schultz's view, agriculture is important for economic growth in the sense that it guarantees subsistence for society without which growth is not possible in the first place. This early view on the role of agriculture in economics also matched the empirical observation made by Kuznets (1966) that the importance of the agricultural sector declines with economic development. In this view, agriculture's role in economic development is to supply cheap food and low wage labor to the modern sector. Otherwise, both sectors have few interconnections. Growth and higher productivity in the agricultural sector can contribute to overall economic growth by releasing labor as well as capital to other sectors in the economy. However, industrialization is seen as the ultimate driving

force behind a country's development and agriculture as a traditional, low productivity sector.

Improving on the Lewis model, Johnston and Mellor (1961) account explicitly for agriculture as an active sector in the economy. In addition to labor and food supply, agriculture plays an active role in economic growth through important production and consumption linkages. For instance, agriculture can provide raw materials to nonagricultural production or demand inputs from the modern sector. On the consumption side, a higher productivity in agriculture can increase the income of the rural population, thereby creating demand for domestically produced industrial output. Such linkage effects can increase employment opportunities in the rural non-farm sector, thereby indirectly generating rural income. Moreover, agricultural goods can be exported to earn foreign exchange in order to import capital goods.

The importance of such linkages was further stressed by Singer (1979) and explicitly embodied in Adelman's general equilibrium idea of agricultural demand led industrialization (ADLI), according to which, because of production and consumption linkages, a country's development strategy should be agriculture-driven rather than export-driven and increased agricultural productivity would be the initiator of industrialization. Moreover, emphasis should be placed on small-to-medium-size farmers because they are more likely to use domestically produced intermediate goods as opposed to large-scale producers who might import machinery and other inputs, which would weaken the linkages between agriculture and other sectors (Adelman 1984). The fact that there are important linkages between the traditional and modern sectors in developing countries makes agricultural growth an important instrument for decreasing poverty. The contribution to poverty reduction takes place directly, through the effects of agricultural growth on farm employment and profitability, and indirectly because increases in agricultural output induce job creation in upstream and downstream non-farm sectors as a response to higher domestic demand. Potentially lower food prices increase the purchasing power of poor consumers. The magnitude of these effects for poverty reduction depends on the specific circumstances of an economy. If, for example, technological progress in the agricultural sector is labor-saving, farm-employment might not necessarily increase (Irz et al. 2001).

Early contributions by Kuznets, Chenery and others focused on sector changes accompanying economic development. In 1966, Kuznets observed that as economies develop, the share of agriculture in output and employment diminishes,

which later empirical data have reconfirmed. Other important early contributions include Chenery and Syrquin (1975), who combined cross-section and time-series data over 1950 – 1970. Timmer (2002) used a panel of 65 developing countries over 1960 – 1985 to show a positive correlation between growth in agricultural GDP and its lagged values and nonagricultural GDP growth. He suggests that this correlation can be explained by first-order effects of agricultural growth on lower food prices, labor migration and capital flows from agriculture, as well as second-order effects such as improved nutritional intake, which improves worker's productivity. Similarly, Self and Grabowski (2007) established a positive relation between different measures of agricultural productivity and average growth of real GDP per capita over 1960 – 1995 for a cross-section of countries. However, on the basis of panel data from 52 developing countries during 1980-2001, Gardner (2005) concluded that agriculture does not seem to be a primary force behind growth in national GDP per capita.

Datt and Ravallion (1996, 1998) find that higher farm productivity reduces both absolute as well as relative poverty. This is partly due to a direct channel of higher household income operating in the short run and partly due to indirect channels, such as higher wages and lower food prices in the longer run. Other empirical studies also suggest that these are the main channels and not labor migration from agriculture into other sectors. This strengthens the argument for supporting agricultural growth. Similarly, Loayza and Raddatz (2010) show for a cross-section of developing countries that growth in more labor-intensive sectors such as agriculture has a larger impact on poverty reduction than less labor-intensive activities. Christiansen and Demery (2007) estimate that 1 percent per capita agricultural growth reduces poverty 1.6 times more than the same growth in industry and three times more than growth in the service sector. Case studies confirm these cross-country findings.

Having reviewed the role that agriculture can play in economic development, we now look at the performance of the agricultural sector in different regions of the world, the foundations of agricultural growth and the challenges faced by farmers in developing countries today that might diminish the returns to agricultural technologies. These include the structure of agricultural production, environmental factors, and barriers to technology adoption.

2.2 Green Revolution and Technology Adoption

Between 1980 and 2004, the agricultural sector grew at an average rate of 2.6 percent worldwide, with two-thirds of this growth contributed by Asian economies. Agricultural yields in Asia increased at an average rate of 2.8 percent between 1961 and 2004, an outcome largely explained by the adoption of high-yielding varieties and the intensive use of fertilizer. In Sub-Saharan Africa, the average rate of agricultural growth was 3 percent over the same period but growth per capita of the agricultural population (a broad measure of agricultural income) was 0.9 percent, less than half the growth rate in other regions. Moreover, whereas agricultural growth during the Green Revolution in Asia was driven by intensification, agriculture in Sub-Saharan Africa has been growing mostly as a response to land expansion and yields have been stagnant. Since the potential for land expansion will soon be exhausted, further agricultural growth will have to come from increased yields. What needs to be done in order to achieve higher yields and, hence, agricultural growth in Sub-Saharan Africa?

The consensus about the need for a Green Revolution for Africa is universal but the characteristics of the African continent call for a different approach to the transformation of agriculture. In comparison with Asia, Africa is heterogeneous in terms of agro-ecological conditions, farming systems and types of crops planted. The FAO considers that there are main farming systems in Sub-Saharan Africa. They depend rather weakly on rice or wheat, which have been the drivers of the Asian Green Revolution. Moreover, most agriculture is rained (de Janvry and Sadoulet 2009a) whereas the Green Revolution in Asia was partly driven by intensive irrigation. In fact, only 4 percent of crop area in Africa is irrigated, versus 34 percent in Asia. Another factor that makes the Sub-Saharan African context different is the underdevelopment of infrastructure, which hinders market access and leads to high transportation costs. As a consequence of the heterogeneity across Sub-Saharan Africa, several geographically separate revolutions will have to take place, in contrast to the Asian Green Revolution, which was based on wheat and rice (Staatz and Dembele 2007).

2.3 Income Diversification in Rural Areas

The rural non-farm sector, perceived to be unproductive and of negligible importance, had in the past received much less attention from governments in the past than, say, the issue of urban bias (Lanjouw and Lanjouw 1995, 2001). Recent

contributions point out that the rural nonfarm sector can serve as a bridge between agricultural-based livelihoods and industrial ones (Barrett et al. 2010), thereby playing an important role in a country's structural transformation. As pointed out above, further agricultural growth will have to come from capital-led intensification of production, which will limit the capacity of agriculture to employ a constantly growing rural labor force. Hence, rural and per-urban sectors will play an important part in absorbing additional labor in the future. Employment in those sectors is stimulated by agriculture growth through the production and consumption linkages described above, and is an important complement to agriculture for rural poverty reduction (de Janvry and Sadoulet 2009b).

The rural non-farm sector comprising, for example, home production of clothing as well as wage employment in rural factories is heterogeneous. Of particular interest when studying this sector is the emergence of rural towns. As they offer a larger market compared with rural settlements, they allow rural enterprises to benefit from economies of scale and higher profits (Hazell and Haggblade 1993). Empirical evidence suggests that such towns have the potential to generate economic growth. China's Township and Village Enterprises are a leading example of this phenomenon (Lanjouw and Lanjouw 1995, 2001).

The most important roles played by the rural non-farm sector are the generation of employment and income for the rural poor. Many households in rural areas today do not specialize in either agriculture or non-farm activities but derive their income from multiple sources. Income diversification plays an important role in the livelihoods of rural populations. Farmers grow different types of crops during the year. Families derive income from non-farm rural activities and receive remittances from household members who have migrated. The literature mentions several reasons why rural households and individuals as opposed to their urban counterpart diversify rather than specialize. Barrett et al. (2001) name four main causes for income diversification into non-agricultural activities: seasonality in employment opportunities, diminishing returns to factors of production, market failures and risk management. Due to seasonal variations in returns to labor in farm activities, individuals might work temporarily in the non-farm sector. Some household members might work off-farm if there are diminishing returns to labor in agricultural production. Simultaneous income generation from both farm and non-farm sectors can be a strategy to cope with income risk if appropriate insurance markets are not

available. Engaging in activities independent from agriculture such as manufactures can counter farm-related risk. Households in Burkina Faso that diversified their income into non-farm activities were more able to cope with droughts during the 1980s (Webb and Reardon 1992). Being able to hedge against risk in this way may enable farmers to increase the adoption of more risky high-return crops (Lanjouw and Lanjouw 1995, 2001). Other market failures can also explain income diversification. If capital markets do not exist, households investing in farm equipment will engage in non-farm activities to raise the required capital. Nonfarm income in Burkina Faso increased farm productivity by stimulating the adoption of animal traction (Savadogo, Reardon and Pietola 1998).¹¹ Missing land markets might prevent individuals whose comparative advantage is in non-farm employment from fully specializing in these activities.

2.4 Market Distorting Policies of Developed Countries

Trade flows have grown more than twice as fast as aggregate GDP over the past 30 years. The developing world's share of global trade increased from about one-quarter to more than one third and the composition of their exports has been upgraded. For a long time they were exporters of primary commodities and importers of manufactured goods, but over the past two decades they have moved strongly into manufactured exports. The export share of developing countries in global manufacturing exports was 20 percent in 1990/91 and rose to 42 percent in 2006/07. For agricultural exports the numbers are 32 percent and 41.5 percent, respectively. Moreover, trade among developing countries also gained importance. While 4 percent of global manufacturing exports went from developing countries to other developing countries in 1990/91, it increased to 20 percent in 2006/07. For agriculture, the corresponding numbers are 7 percent and 20 percent. Despite these changes and several rounds of trade liberalization, many developing countries have been unsuccessful in integrating with the world economy. Nearly all the growth in developing country shares of trade has been driven by middle-income countries. By contrast, the 49 least-developed countries most of which are in Africa have gained no market share at all. Moreover, some regions have seen much smaller shifts in the composition of their exports. The manufactured share of merchandise exports is 80–90 percent in East and South Asia but only 60 percent in Latin America. Africa and the Middle East have yet to reach the 30 percent mark, and many countries

particularly poor countries remain dependent on exports of agricultural goods and natural resources.

Trade barriers in developed countries share the blame for this stagnation. True, in almost all slow or non-integrating countries the investment climate has not been favorable enough — for a range of reasons, including resource depletion, weak infrastructure, and poor economic management — to attract the investments needed to transform export patterns. Thus steps to strengthen the investment climate need to be a major element of any strategy to promote integration. But developing country exporters have also faced obstacles to developed country markets in every major sector agriculture, manufacturing, and services. Developed and developing countries alike maintain high protection especially for agriculture, creating a drag on developing countries agricultural exports. In 2004, agricultural policies contributed 83 percent to the welfare cost of overall trade-distorting policies in developing countries (Valenzuela et al. 2009). Of particular concern are the pockets of protection against products of interest to developing countries, especially agriculture.

Developed countries continue to impose substantial obstacles on imports from developing countries, despite pledges to remove or reduce them. High-income countries provide more than \$300 billion a year in domestic agricultural subsidies three times the amount of aid to developing countries and block or discourage agricultural exports from developing countries in many other ways. Developed countries have tariffs and quotas on textile imports that cost developing countries an estimated 27 million jobs. Other tariffs and nontariff barriers further undermine manufacturing and employment in developing country industries. Developed countries have an extensive network of protection and support for their agricultural sector, mainly border barriers and subsidies. Border barriers, such as tariffs and quantitative restrictions, are designed to support prices in domestic markets. This form of protection most distorts international markets and harms developing countries, and accounts for about 70 percent of protection in OECD countries. Production-related subsidies given to farmers under different schemes, called direct support, usually take the form of direct budget transfers and are much less distortive. Agricultural goods produced behind high tariff walls and with production subsidies often require export subsidies to be sold in world markets. These agricultural policies raise costs of \$17 billion per year on developing countries, which is five times the overall flow of overseas development assistance to agriculture. To export their

agricultural goods to OECD countries, they must overcome tariffs at least 10 times those on typical intra-OECD exports (of all products). The average tariff that developing countries face for agricultural products in general is 16 percent compared with only 2.5 percent for manufactures (Anderson and Martin 2005). Moreover, OECD countries provide agricultural subsidies that drive down world prices for agricultural exports, undermining the livelihoods and markets of farmers in developing countries. Although efforts have been made over the past to reduce average support to agricultural producers from 37 percent of gross value farm receipts in 1986-88 to 30 percent in 2003-2005, the absolute amount increased from \$242 billion to \$273 billion a year over the same period (World Bank 2007). The issue here is not the support that developed countries provide for rural development; it is the size and form of that support and its pernicious effects on the prices of goods produced by developing countries.

2.5 Credit

Beckman and Foster (1969) defined credit as the power or ability to obtain goods or services in exchange for a promise to pay for them later. In other words, it is the power or ability to obtain money, through the borrowing process, in return for a promise to repay the obligation in the future. According to these authors, credit represents the actual or prospective debtor's power or ability to affect an exchange by offering his promise for future payment. Credit is necessary in a dynamic economy because of the time that elapses between the production of a good and its ultimate sale and consumption. The risk in extending credit is the probability that future payment by the borrower will not be made. Futurity is thus a basic characteristic of credit and risk is necessarily associated with the time element. Regarding financial institutions, there are private and governmental organizations, which serve the purpose of accumulating funds from savers and channeling them to individuals, households and businesses, needing credit. Financial institutions are composed of deposit-type institutions bank and non-bank-contractual saving institutions, personal and business financial companies, government and quasi-government agencies, and miscellaneous lenders. Formal financial institutions can be defined as institutions that are regulated by central bank's supervisory authorities for licensing and credit policy implementation. Formal loans are those disbursed by financial institutions that are set up legally and engaged in the provision of credit and mobilization of savings.

According to Bekele (1995), informal credit sources are categorized as commercial (those who lend money on short-term basis to obtain profit) and non-commercial (lenders that generally include friends, relatives and neighbors). Mutual help associations include Iddir, Iqqub, modern cooperatives, NGOs, etc. Informal finance is the one that comprises of all lawful but unregulated activities, such as rotating and non-rotating savings and credit associations (ROSCAs), moneylenders and money collectors and other providers of retail financial services. Default is defined as failure to pay a debt or a loan at the right time. On the contrary, non-default is defined as payment of a debt or a loan at the right time. Hulme (1996) defined credit worthy (synonymous to non-defaulter) borrowers as those who satisfy the entire loan contract conditions and repay their loans without ever going into arrears. Non-credit worthy (defaulters), as opposed to non-defaulters, is those who breach their loan contracts and have repayment problems.

2.6 The Need for Credit

Credit is the key input in every development program; this is particularly true for rural development because so long as sufficient credit is not provided to the development programs of poor sections of the society, the goal of development cannot be achieved. Access to capital in the form of either accumulated savings or a capital market is necessary in financing the adoption of many new agricultural technologies. Several authors Adams and Graham (1981), FAO (1996), Gonzalez-Vega (1977) and Pischke (1980) have underlined the importance of credit facilities to smallholders of less developed countries. Governments of less developed countries and aid agencies have extended a large amount of money in the form of agricultural loans. The motivation has been the belief that loans are an essential part of various input packages that are prescribed as part of agricultural investment projects designed to introduce modern technologies and thus stimulate change and growth in agriculture. Kumar. (1987) indicated that the need for credit in the case of majority of cultivators arises from inadequate savings to finance various activities on their farm. Moreover, while their income accrues during limited period of the year, their expenses are spread throughout the year. This implies that expenditure on inputs have to be incurred much in advance of the income from resulting outputs. Producers meet these expenditures out of their past savings; and when these savings fall short of the requirement, they borrow. Studies undertaken in Ethiopia show that credit provision to small farmers

increases their productivity and improves their standard of living. For instance, Assefa (1987) reported the need for the expansion of rural credit to all areas of the country. Likewise, Berhanu (1993) and Getachew (1993) pointed out the need for agricultural credit to increase productivity and accelerate adoption rates. Because of high population pressure in rural areas of developing countries like Ethiopia, bringing of additional productive land under cultivation is difficult, implying the need for improving farm level productivity through intensification. This involves the use of improved farm inputs such as fertilizers and selected seeds besides improved tillage and husbandry practices. These inputs are not available on the farm and some farmers are not able to purchase them due to their meager resources. Moreover, most of the commercial inputs are expensive and hence smallholder farmers cannot afford to them from their own cash earnings. It is, therefore, generally acknowledged that rural credit can improve smallholder's farm productivity through use of purchased farm inputs. Generally, credit removes a financial constraint and helps accelerate the use of new technologies, increases productivity, and improves national and personal incomes. In addition, it constitutes an integral part of the process of commercialization of the rural economy and a convenient means of redressing rural poverty (MOA, 1995).

2.7 Review from Previous Studies

There are many reasons why a country like Myanmar should give priority to agriculture. As the majority of the people in the country are in the agricultural sector, raising farm productivity means raising the incomes of the majority of the people. Increasing farm incomes also means improving the wellbeing of the poorer segments of society as poverty tends to be more prevalent in the rural areas. Moreover, agriculture is the main source of export earnings. It has strong links with the rest of the economy by providing raw materials to industry and a market for goods and services produced by other sectors. As the largest contributor to GDP, it is the key sector on which reliance has to be placed to mobilize resources for capital formation and economic development. (The Role of Agriculture in the Development of Myanmar Economy by Nyein Zin Soe, School of Public Policy and Management, Korea Development Institute. Korea)

Agricultural input supply system has an immense contribution in enhancing the productivity of agricultural commodities through collective action of relevant actors within the system. The system also plays important roles in bridging modern

agricultural technologies to the peasant sector. Moreover, it has potential to influence goals, strategies and resources and thus bring about changes in policies, programs and other related agricultural projects. To insure food self-sufficiency, identifying of influential factors in the smooth functioning of the system is essential to design purposeful intervention planning for betterment of the farming community in particular and the society at large. (Analysis of Agricultural Input Supply System by Kassu Kubayo Seko, Haramaya University, Oromia, Ethiopia)

The main barriers of sustainable development of state-owned Myanmar Agriculture Development Bank (MADB) are insufficiency of source of political impact. Through MADB has mandate is disburse loans to not only farmers, but to rural socio-economic enterprises according to existing MADB Law, it can provide most loan to only farmers. MADB's current lending portfolio was heavily concentrated on farmers engaged in only some commodities; paddy, pulses, groundnut, and sesame leaving the rest of activities, products and services in the agriculture sector. Beside, MADB law mandates to provide not only agriculture crops, but also live-stock, fisheries and vegetables and production, processing, storage, distribution and marketing activities. However, because of insufficiency of operating funds, MADB has not provided these activities as mandate and it mainly provides loans for paddy production. (A Study on Loan System of Myanmar Agriculture Development Bank by Nilar Win, EMDevS-47, 13th Batch, Yangon University of Economics)

CHAPTER III

OVERVIEW OF MYANMAR AGRICULTURE DEVELOPMENT BANK

3.1 History of Myanmar Agriculture Development Bank

Myanmar is an agricultural country. It is estimated that the agriculture sector represents between 35 to 40 percent of gross domestic product (GDP) and that up to 70 percent of the labor force (of 32.5 million) is directly or indirectly engaged in agricultural activities or depend on agriculture for their income. Moreover, it is estimated that agriculture products generate between 25 and 30 percent of total export earnings. Given agriculture's important contribution to the economy, the modernization of the agriculture sector is a top priority in the economic and social development agenda of the Government of Myanmar.

Looking forward, Myanmar's agricultural potential is enormous given the country's rich natural resources and favorable geographical location. Myanmar's diverse topography, climates, water resources, and eco-systems offer farmers and investors the opportunity to produce a wide range of cereals, pulses, horticultural products, fruits, livestock, and fish. Because of its strategic location between the two enormous regional markets of India and China, and easy access to buoyant markets in the Association of Southeast Asian Nations (ASEAN), Myanmar's agriculture sector is well positioned to grow, develop a dynamic agribusiness industry, and provide people with the opportunity to improve their-living standards.

Among the government institutions supporting the agriculture sector, the Myanmar Agriculture Development Bank (MADB) plays an important role. MADB was established in June 1953 by the Government of Myanmar to support the development of agriculture, livestock, and rural enterprises in Myanmar. MADB is currently the largest financial institution serving the rural areas and financing agriculture activities. At the end of 2012, MADB served 1.87 million customers,

mostly farmers, and had a network of 206 branches (which accounted for 23 percent of all banks' branches in Myanmar). Since its creation, MADB has played an important economic and social role by providing loans to a large segment of low-income households engaged in agricultural activities.

Despite the existing limitations in its information technology (IT), infrastructure, and operations platform, every year MADB disburses a large volume of short-term loans to farmers both during the monsoon and the winter agricultural seasons. Moreover, despite the inherent risks of the agriculture activities and lack of financial instruments to mitigate risks in its loan portfolio, MADB has historically had a strong track-record in loan recovery thanks to the various mechanisms it has put in place with local authorities to exert pressure on delinquent borrowers. Notwithstanding its past success, MADB is in need of a profound reform to ensure that the institution is able to contribute to the modernization of the agriculture sector in a meaningful manner. Currently, MADB faces various weaknesses, such as the following:

3.2 MADB's Mission and Policy Mandate

MADB's mission is clearly stated in its law (article 5), which requires MADB to support the development of agriculture, livestock, and rural socioeconomic enterprises in the country by providing banking services. However, in practice MADB's business operations are not properly aligned to this goal; in fact, MADB's current lending portfolio is heavily concentrated on farmers engaged in only four commodities, leaving the rest of activities, products, and services in the agriculture sector completely beyond its business focus. MADB provides loans to farmers to cover a fraction of the production costs for up to their first 10 acres. Most of MADB's borrowers are engaged in subsistence agriculture using rudimentary cultivation techniques that prevent them from reaching high yields for their crops. MADB does not support medium or large holder farmers engaged in commercial agriculture or other agribusiness firms, traders, exporters, and other type of firms along the entire value chain, although the MADB law allows it to lend for production, processing, storage, distribution, and marketing activities relating to the agricultural and livestock enterprises. Even when its clients grow and diversify their business activities, MADB does not support them.

Moreover, MADB finances the production of only a limited number of crops and commodities nationwide, such as paddy, groundnut, sesame, beans, cotton, and corn. MADB does not finance the production of fruits and other vegetables with a higher value in the marketplace. More worrisome is the fact that MADB does not finance livestock, the production of seeds, fertilizers, processed foods, beverages, forestry activities, or any other high value-added product.

Prudential ratios restricting the business operations of MADB is counterproductive, because the financing needs of the agriculture sector in Myanmar are huge. Credit to the private sector in Myanmar amounts to only 7.9 percent of GDP, a low figure compared to other neighboring countries. Although a growing number of microfinance institutions and informal lenders are serving farmers, they have limited capital, and the demand for credit in the agriculture sector remains largely unmet. Moreover, informal lenders usually lend at interest rates of 6 to 10 percent or more per “month,” or 72 to 100 percent per year, creating a trap for many debtors who have become highly indebted and unable to repay their loans. Reportedly, many farmers actually borrow from MADB simply to roll over debt or payoff the high interest loans provided by informal lenders (Ashe Center 2011). There is plenty of room in the marketplace for MADB and several other private (or state-owned) banks, microfinance institutions, specialized financial institutions, and so forth. In fact, it is estimated that more than 3.5 million farmers are not served by MADB due to lack of land titles. Moreover, the provision of modern instruments for agriculture finance, such as warehouse receipts financing, contract farming, supply chain financing, factoring, leasing, and trade finance is still at an incipient stage in Myanmar. The provision of loan guarantees, insurance products, and long-term credit for large infrastructure projects and land acquisitions is still unavailable.

MADB aim to provide loans for the development of agricultural, livestock and rural socio-economic enterprises in a simple procedure, to promote rural banking, to encourage saving habit in order to bring about it self-help spirit among rural population, to support socio-economic development in the rural area, to cultivate habit of using banking services and to develop banking business

3.3 Overview of the Agriculture Sector and the Role of MADB

Agriculture is the largest economic sector in Myanmar. The agricultural sector, including livestock and fisheries, is estimated to contribute between 30 and 40 percent to gross domestic product (GDP). In terms of employment, approximately 70 percent of the labor force (of 32.5 million) is reportedly engaged in agriculture or dependent to a significant extent on agriculture for its income. The agriculture sector also accounts for 25 to 30 percent of total exports by value. Pulses, rice, rubber, and fisheries constitute the main agricultural export commodities of Myanmar.

Paddy dominates the agriculture sector, accounting for around 60 percent of the net sown area and around 80 percent of the total value of sector production (Vokes and Goletti 2013). Other key crops include pulses, oilseeds, and rubber. The country also produces, sugar, maize, a wide range of fruit and vegetables, palm oil, and coffee. Livestock currently is a relatively small sector of agriculture, contributing only 7.5 percent of total agricultural GDP.

Farmers generally grow lower value crops such as paddy, pulses, and oilseeds on relatively large surfaces, while high-value horticulture and fruit crops take place on much smaller plots. Paddy, pulse, and oilseed farmers cultivate an average of 4.0 to 5.0 acres per holding. In contrast, onions, garlic, and potato fields average about 1.5 acres each, while vegetables and cut flowers are grown on plots ranging between 0.6 and 0.7 acres in size (USAID 2013).

The agriculture sector is undercapitalized, reflecting decades of insufficient levels of investment, including in basic infrastructure such as roads, warehouses, electricity, irrigation systems, research, sanitation centers, and extension services, among other basic infrastructure, resulting in low productivity in the sector and low rural incomes. It is estimated that agriculture annual income per worker in Myanmar was only US\$194 in 2012 compared to US\$6,680 dollars in Malaysia and US\$706 in Thailand.

Agriculture finance remains underdeveloped due, in part, to the small size of the banking system. The banking system of Myanmar is composed of 4 state-owned banks with a network of 547 branches, 19 domestic private banks with a network of 347 branches, 1 private-owned finance company, and 16 foreign bank representative offices. In 2012, domestic bank deposits and private credit accounted for only 17.9 and 7.9 percent of GDP, respectively, according to data from the Central Bank of Myanmar (2013). Myanmar has 2 bank branches per 100,000 adults and 123 bank

accounts per 1,000 adults. In all these indicators, Myanmar lags behind its neighboring countries.

MADB was established in June 1953 by the Government of Myanmar to support the development of agriculture, livestock, and rural enterprises in Myanmar. It is currently owned and supervised by the Ministry of Agriculture and Irrigation (MAI). Since its establishment, MADB has played an important economic and social role in Myanmar by providing loans to a large segment households in rural areas engaged in agricultural activities. Most MADB loan products are designed to cover the short-term working capital needs of farmers, such as purchase of seeds, fertilizers, and pesticides; payment of salaries for farm workers; and lease of agriculture equipment. MADB lends at subsidized interest rates, following the lending policies and programs issued by MAI.

Therefore, it is advisable to lift all the administrative restrictions that prevent MADB from serving a wider range of clients and activities in the agriculture sector of Myanmar as mandated by its 1990 law. By doing so, MADB could have a higher developmental impact in the agriculture sector, leverage its extensive branch network in a more productive manner, diversify its sources of income, and mitigate risks.

3.4 Lending Operations

Loans are the main financial product offered by MADB to its clients. MADB offers two types of loans to its customers nationwide: the seasonal crop production loan and the term loan, which account for 98 percent and 2 percent of total outstanding loans in 2012, respectively.

3.5 Seasonal Crop Production Loan (SCPL) and Term Loan (TL)

The SCPL is designed to cover the working capital needs of smallholder farmers at the beginning of the agriculture season. Loans are divided into three categories: monsoon, winter, and pre-monsoon loans, with the first being the most important type of loan for MADB. Loan maturity is up to one year and full repayment is expected at harvest time. The loan amount varies according to the number of acres owned or leased by the farmer and the intended crop. (See table 6 for all loan types.)

TLs are classified in three subgroups: Short-term loan, farm machinery loan, and special project loan. Most TLs are collateralized. The short-term loan is provided

to finance sugarcane plantations, tea processing, and solar salt production. The farm machinery loan is the only type of loan that requires compulsory savings by the farmer. This type of loan is granted for the purchase of machinery for agricultural purposes and is given with a three-year maturity period. The repayment is divided into three installments, with an option to repay with the compulsory deposit at the end of each year. The last subgroup is the special project loan, which is a loan granted by MADB to finance rubber plantations under the Government's border area development projects.

Table (3.1) Type of Loan Offered by MADB

Seas Seasonal Crop Production Loan (SCPL)p	Term Loan (TL)
S1 Monsoon loan (less than 1 year) (a) Paddy (b) Groundnut (c) Sesame (d) Beans (e) Long staple cotton (f) Corn	T1 Short-term Loan (1-3 years) (a) Solar salt production (b) Sugarcane plantation (c) Tea processing (d) Coffee plantation (e) Citronella grass
S2 Winter loan (less than 1 year) (a) Paddy (b) Groundnut (c) Sesame (d) Beans (e) Long staple cotton (f) Corn (g) Mustard	T2 Farm machinery loan (more than 3 years)
S3 Pre monsoon loan (less than 1 year) (a) Paddy (b) Long staple cotton	T3 Special project loan (more than 3 years)

Source: MADB

3.6 Breakdown of the Loan Portfolio

Monsoon loans dominate the lending portfolio. As illustrated in figure 2, the monsoon subtype of loan accounted for 85 percent of the total MADB's lending portfolio in 2012, followed by the winter season loan (11 percent). The remaining part of the loan portfolio is composed of term loans in their different modalities

One commodity dominates SCPLs. In terms of commodities, paddy (88 percent), beans (5 percent), and sesame (3 percent) are the top three crops financed by MADB under the SCPL in the agricultural year 2011–12. The average loan amount per borrower is kyat 195,000 (equivalent to US\$230).

Table (3.2) Loan Disbursement Period and Loan Collection Period

Type of Loan	Loan Disbursement Period	Loan Collection Period
S1 Mon son loan	May – August	December–March (following year)
S2 Winter loan	September – January	February – June (following year)
S3 Pre monsoon loan	January – February	December (same year)
T1 Short-term loan		
(a) Solar salt production	October–December	August next year
(b) Sugarcane plantation	January–February	February next year
(c) Tea processing	April–June	March next year
(d) Coffee plantation	----	-----
(e) Citronella grass	June–July	May next year
T2 Farm machinery loan	Anytime	3 year loan
T3 Special project	Anytime	Not available

Source: MADB

3.7 Loan Guarantees

Most of MADB's loans (99.9 percent) require a joint guarantee of borrowers instead of collateral. Individual farmers must join a group of 5 to 10 members and collectively guarantee each individual loan. MADB grants loans to farmers only in townships with fuller payment history. As a result of this strict requirement, up to now MADB has reported a high loan quality.

Despite the effectiveness of group guarantees and the historical high repayment ratio reported by MADB, MADB should treat these loans as unsecured loans and adopt more stringent standards on capital and provisioning. MADB may face serious financial difficulties due to its undiversified loan portfolio especially in the event of a widespread weather-related problem affecting the crops being financed. This means that MADB should maintain a higher capital adequacy ratio and accumulate more provisions to be able to deal with unexpected losses, whenever and wherever they arise

Machinery loans require collateral. Under the farm machinery loan, which accounted for only 0.02 percent of total loans, the machinery is taken as collateral, and in addition a compulsory savings of 40 percent is required for machines sold by the Government and 50 percent for machines sold by the private companies. Tea-processing and coffee plantation loans are guaranteed by the Government under its special projects.

3.8 Loan Amount per Farmer

The size of the land that a farmer has the right to use for agricultural activities determines the loan amount granted by MADB to each farmer. Each farmer can get a loan for a maximum of 10 acres. Every year, MAI estimates the total production cost for each type of crop and the percentage of it that MADB will finance (usually less than 40 percent of the total production cost). For the agricultural year 2013–14, MAI mandated MADB to significantly increase its individual loan amount from K 50,000 to K 100,000 per acre for paddy and sugar cane, and from K 10,000 to K 20,000 per acre for other crops such as sesame and peanut.

The current loan amounts used by MADB do not cover the total cost of farming. For low-quality rice, for example, the production cost is estimated at around K 200,000 per acre and K 400,000 for high-quality rice such as Pearl Thwe rice. The labor contribution from family members is excluded from the aforementioned costs.

Table (3.3) Change in Loans per Acres for Seasonal Loans

Fiscal Year	Loan per acre change for paddy	Loan per acre change for Other crops	Loan per acre change for Sugercane
2003/04 to 2004/05	7,000	4,000	
2005/06 to 2008/09	8,000	4,000	
2009 - 2010	10,000	6,000	
2010 - 2011	40,000	10,000	
2011 - 2012	50,000	10,000	
2012 - 2013	50,000, 80,000	10,000	
2013/14 to 2015/16	100,000	20,000	100,000
2016-2017	150,000	20,000	100,000
2017 - 2018	150,000	50,000	100,000

Source; Seasonal Loan Department of MADB

The significant increase in the loan size per acre explains the rapid increase in the loan portfolio of MADB in the past years. As shown in table 7, the loan amount per acre for paddy production increased from K 10,000 in agriculture year 2009–10 to K 40,000 in year 2011–12, an increase of 300 percent. During the same period, the total number of acres financed by MADB increased only by 18 percent as there was a loan cap of 10 acres per farmer.

3.9 Credit Policies

Credit policies at MADB are weak and far from international best practices. To begin with, MADB is not fully involved in the credit decision-making process. MADB delegates the credit decision to the loan screening committees at the village level. Each village has its own committee. Each branch of MADB covers several villages in that particular township and manages several such committees, each of which is composed of the head of village, the representative from the Land Record Department, the representative from the Department of Agriculture, the representative from the Industrial Crop Department, and the representative from the farmers. There is no representative from MADB in these committees.

To apply for a loan, farmers have to submit a loan application to the loan screening committee at the village level for approval. MADB requires farmers to have a good credit history, to join a group of 5-10 farmers to mutually guarantee their

loans, and to submit the Farmer Registration Book issued by the village authorities. The book is required to verify the farmer's right over the land leased from the Government year by year; it could not be used as a guarantee. However, a new farm law was recently passed by the parliament under which farmers will be issued ownership certificates, which could be transferred and thus pledged as collateral. Issuing certificates is under way, and MADB will need to adapt its lending terms and conditions to these new circumstances.

Once the application is submitted to the loan screening committee at the village level, the committee reviews and approves all loan applications that meet the conditions. MADB's branch managers' sign off the loan application after the committee's approval. MADB staff is not allowed to travel to the villages for loan operations; farmers must come to the bank in town to take out and to repay loans, incurring in considerable travel related costs. Loan screening committees also help to ensure that farmers pay off their loans on due dates. They exert pressure on delinquent borrowers with the argument that if a single borrower fails to repay its loan, the entire village will not be able to borrow from MADB in the next season.

Since the committee takes on the credit decision and monitoring process, MADB virtually performs only an agent role by acting as a money distribution channel for the Government. In the event of default, all members in the group are liable for repayment. If the group cannot repay, MADB has to bear the resulting losses. The branch manager at the township level is held responsible for following up with the delinquent borrowers and guarantors.

At the end, MADB is responsible for the loss even though MADB is not involved in the credit decision-making process. Clearly, this is not a healthy arrangement for the banking business. MADB must be fully involved in the credit decision-making process and the loan officers must be held accountable for their decisions.

3.10 Pricing and Funding

MADB offer three type of loan per year, Pre monsoon, Monsoon and Winter. Loans disburse in Township Branch. MADB has issued K1097 billion worth of loans to farmers this fiscal year, K70 billion less than in fiscal year 2014-15, according to

official data. The bank is barely profitable, but is the only affordable source of funding for 2 million of Myanmar's farmer households.

Table (3.5) Loan Amount during Financial Year 2015-2019

Type of Loans	Amount (Kyat in Million)	Duration of Loan
2016-Monsoon	14,01,599.58	May to September
2016-Winter	2,12,661.70	October to January
2017-Pre monsoon	16,362.60	January to March
2017-Monsoon	14,16,704.30	May to September
2017-Winter	2,72,222.95	October to January
2018-Pre monsoon	18,781.70	January to March
2018-Monsoon	13,01,614.55	May to September
s2018-Winter	366,263.90	October to January
2019-Pre monsoon	16,500.90	January to March
2019-Monsoon	10,62,864.05	May to September

Source: MADB

Interest rates for MADB's lending and deposit products are set by MAI with no consideration to the risk profile of borrowers, the need for MADB to reach profitability, or other prevailing conditions in the marketplace. In recent years, the Government of Myanmar has aimed at supporting smallholder farmers by providing loans through MADB at subsidized interest rates. As shown in table 8, in 2012 the lending interest rate dramatically dropped from 13.0 to 8.5 percent per year, while the interest rate for retail deposits remained unchanged at 8.0 percent. As a result, the interest rate margin for MADB has narrowed drastically. While in 2011 the interest rate margin was 5.0 percent, in 2012 it was only 0.5 percent. The current margin is clearly insufficient to cover operating expenses and absorb losses and it is also the major reason why MADB has stopped savings mobilization in spite of its specific objectives under section 6 of its law. In fact, historically MADB used to mobilize and accumulate a large base of compulsory and voluntary savings. But in 2011 up to 90 percent of retail deposits were returned on concerns at the parliament about difficulties with withdrawals, which practically wiped out the sizable capital base and liquidity of MADB.

MADB depends on MEB funding. To deal with the drastic decline in the interest margin and avoid the bankruptcy of MADB, the Government has mandated

the MEB, the largest state-owned commercial bank in Myanmar and one with very high liquidity, to provide subsidized funding to MADB. Thus, the MEB places a wholesale deposit with MADB at the rate of 4.0 percent so that MADB can lend at 8.5 percent which is far below market rate (market interest rate for loans in Myanmar is 12.0 to 13.0 percent) and thus could achieve an interest margin of 4.5 percent.

The subsidized funding provided by the Government through MEB has allowed MADB to remain afloat and continue its business expansion. Moreover, MADB's sources of funding have been changing rapidly in favor of the cheap funding provided by the Government through MEB. In 2013, it was expected that practically all funding to MADB would come from MEB.

The current funding model, however, is unsustainable for all parties involved. MEB raises deposits at the rate of 8 percent, but lends to MADB at 4 percent per year. Ultimately, to minimize losses, MEB needs to be compensated by the Government for the annual losses it incurs in this scheme. As a result, the ultimate cost of this funding scheme is being absorbed by taxpayers. See box 1 for more on this.

Table (3.6) Annual Interest Rates and Margin of MADB

Period	Loan Interest Rate	Retail Deposit Interest Rate	Interest Margin
April–December 1998	12.0%	9.0%	21.0%
January–March 1999	12.0%	6.0%	18.0%
April 1999–March 2000	10.0%	7.0%	17.0%
April 2000–March 2006	9.0%	6.0%	15.0%
April 2006–August 2011	12.0%	5.0%	17.0%
September–December 2011	10.0%	5.0%	15.0%
January–March 2012	8.0%	5.0%	13.0%
March 2012–2013	8.0%	0.5%	8.5.0%

Source: MADB and mission team's calculation

The practice of providing subsidized lending to smallholder farmers should end soon. This practice cannot be the basis for MADB's future growth. Such subsidies create long-term market distortions, hook farmers in cheap loans, and prevent any commercial financial institutions from ever entering the market.

As shown in table 3.6, MADB had previously been borrowing from MEB at higher interest rates and operated on a commercial rate for many years up to 2011. MADB should borrow from other financial institutions on market terms, and perhaps in the future also be able to raise money in the capital markets and even from outside the country as allowed by its law in section 20 (e). Like other agricultural banks in the region, MADB could also raise savings deposits from its clients as a source of capital. To do so, MADB must be allowed to lend to its clients at market interest rates, pricing its lending products according to the risk profile of borrowers or activities to be financed.

A transition from the current subsidized interest rates to future market-based interest rates should be done on a gradual basis to ensure that the provision of financial services to low-income farmers is not disrupted. Even at market rates, the loans provided by MADB would be by far much cheaper than the loans currently provided by informal lenders, which impose annualized interest rates of 72 to 120 percent to borrowers in rural areas, causing a serious problem in terms of indebtedness for many of them.

3.11 Risk Management

Currently, MADB has no written guidelines on risk management. It is recommended that MADB establish a risk management strategy in line with international principles to support its business growth. This risk management practice can ensure sustainable profitability and minimize adverse effects in the course of business difficulties. This risk management framework should cover all relevant risks related to MADB's business operations, such as credit, interest rate, liquidity, and operation risks.

The biggest risk faced by MADB is credit risk, namely the possibility that a farmer defaults on the loan agreement. Such a default may be caused by the client's deliberate intention not to honor the loan agreement due to political and/or other instigations or simply by the clients' inability to repay because of financial encumbrances caused by natural disasters or volatility of commodity prices, among other factors. So far, credit risk has been contained by MADB's ability to exert pressure on delinquent borrowers through local authorities. Despite MADB's strong pressure on borrowers to repay, MADB's loan portfolio remains heavily at risk. MADB's loan portfolio is undiversified and uncollateralized. Loans are homogenous

in nature, because they are concentrated on a few commodities. Even though MADB tries to diversify the loan book by crop type, there is high possibility of significant volatility in the bank's loan book due to high levels of covariant risk, especially in the case of natural disaster. In 2012, 99.9 percent of MADB's loans are short-term seasonal crop production without any collateral, only joint personal guarantees, which in a systemic event—plague, drought, or other weather event will not likely be honored by farmers. Only 0.02 percent of the loan portfolio, namely loans for farm machinery, is partially protected, by at least 40 percent compulsory savings.

MADB has strict rules and grants loans only to farmers with full repayment history. The MADB requires joint guarantee in a group of 5 to 10 borrowers and farmer registration book. The newly passed farm law will give farmers certificates of ownership of their farms, which are transferable and MADB, like all other banks, will be able to take these certificates as collateral.

MADB also needs to substantially increase its capital and create more reserves to meet the growing demand and be able to absorb losses whenever they arise. Looking forward, MADB should also take actions to estimate the probability of default in the different segments of its loan portfolio. Moreover, MADB could develop insurance products for farmers, set limits to its exposure to borrowers likely to default, and diversify its lending portfolio by serving new types of clients and financing a wider range of commodities and activities in the agriculture sector.

Market risks may arise from changes in interest rates, exchange rates, securities prices, and unstable commodities prices. These changes affect the bank's present and future income. In the case of MADB, the interest rate is the only prominent market risk that MADB may face at the current level of operation.

The MADB so far does not have any exchange rate risk since its business is based on local currency. In terms of sources of fund, both retail deposit and wholesale deposit from MEB are denominated in kyat currency. The bank has never borrowed from overseas for its banking operation, although it is allowed to do so. In term of the use of funds, the MADB offers only kyat currency loans to farmers.

MADB does not have a clear legal framework to access liquidity in extraordinary circumstances. Liquidity risk is defined as the risk caused by the MADB's inability to meet its obligations when they come due. This may be because of an inability to convert assets into cash or to obtain sufficient funds to meet cash needs at appropriate costs within a limited time frame. Due to a change in funding

strategy, the MADB has shifted its funding from retail deposits to wholesale deposit from MEB. As a result, MADB has less pressure from retail depositors. However, in the unlikely event that MEB calls back its short-term wholesale deposit, MADB would face significant difficulty in recalling thousands of small loans from individual farmers before harvest time. Moreover, MADB cannot automatically rely on MAI for financial support, nor can MADB go to the CBM as lender of last resort, because MADB is technically not a supervised bank.

Finally, MADB faces significant operational risks. The bank's documentation is in paper-based format, which is prone to loss, fire, termites, humidity, and so forth. The bank lacks a functioning IT system. These factors may result in unexpected losses to MADB. Therefore, it is recommended that MADB address this matter in the near term.

3.12 Operations

MADB's operational infrastructure is rudimentary. All documents in the MADB system, including loan documents and customer's information, such as signature record and identity card, are paper based and thus in danger to loss or damage (e.g., by fire, termites, and so forth). The record-keeping system is outdated and inefficient. There is no electronic loan tracking system. The data processing is fully manual and not able to produce information in real time. With the current database system, it is difficult for management to fully utilize its own information system for bank operations, internal management purposes, and planning.

As a result of its lack of IT infrastructure, the bank has a limited management information system. All internal reporting has to be performed on simple spreadsheets and shared between offices by fax and telephone. This comes at the cost of reliability, timeliness, and accuracy of the data. In term of customers' reporting, the bank should provide written documents/invoices to notify customers of their debt burden, including payment deadlines, outstanding debt, interest, and other charges. However, with the current operational system it is difficult for MADB to manage customers' accounts and notify customers of their debt burden. With the existing system, it is hard for the bank's management to perform its business functions and manage risks. It is urgent that the bank upgrade its IT infrastructure.

Since there is no Treasury Department in the MADB headquarters, branches have to manage their own cash inflows and outflows. Some branches install safe

deposit boxes at the nearby police station. The cash flow of MADB is heavily dependent on MEB's cash flow position. So far, adequate communication and coordination between both institutions has helped to resolve the liquidity needs of MADB's branches. However, in the long run, as MADB continues to grow, it should upgrade its cash management policies and practices and diversify its sources of funding.

3.13 Accounting and Financial Reporting

MADB is not in compliance with the International Accounting Standards. MADB, like other banks, follows bank practice and the double entry bookkeeping system and closes its books daily. However, its financial statements do not indicate which accounting standards were used for their preparation. It is clear that the MADB's financial statements do not strictly comply with the IAS. Even though compliance with the IAS is voluntary, many countries encourage their state-owned enterprises to adopt the IAS in their regular accounting practices in order to encourage transparency and accountability.

In their current form and contents, the financial statements of MADB do not provide sufficient information to management, owners, or analysts. It is hard to identify the risk areas in the bank business. As a result, the existing financial statements of MADB are of limited value from both a management and financial perspective. It is recommended that MADB adopt key principles of the IAS practices, especially for revenue recognition, borrowing cost calculation, assets' impairment, and provisioning.

Similarly, the current annual financial report of MADB provides marginal information on capital fund, loan portfolio, income, expenditures, prudential ratios, and observance of anti-money laundering requirements. In terms of financial data, the report provides itemized figures of MADB balance sheet account, income statement, and cash flow statement. The audited accounts of the MADB do not contain the level of detail that would be required to meet the IFRS.

3.14 Issues to Consider for MADB's Long-Term Transformation

In the long term, authorities will have to assess and decide on what type of institution MADB should be. Should MADB play a more active role in the much-needed modernization of the agriculture sector of Myanmar? Should MADB remain

as a bank only for smallholder farmers, or should it broaden its business activities to support other participants in the agriculture sector? Should MADB be just a financial institution or should it become a development agency with broader tools (e.g., advisory services) to support the agriculture sector?

A broad spectrum of issues needs to be carefully considered by authorities. Providing detailed proposals for the long-term restructuring of MADB is not the goal of this report. That can happen only through a process of extensive consultations among authorities and other stakeholders. Nonetheless, to lay the ground for future discussions and consultations, this report outlines several questions and issues that need to be carefully analyzed by policy makers and other stakeholders in Myanmar.

3.15 Review on MADB Bank

MADB need for specialized financial institution in a variety of area. These range from banking agents, to warehouse receipt-financing companies, to simple finance companies that specialize in agricultural credit. Obviously, these specialized FIs must be properly licensed. At present, these process for becoming licensed as a special-purpose financial institution is not well-defined through theoretically, it is not prevented by the law or regulation. However without a clear policy to promote special-purpose finance companies for agriculture or, for that matter, for any other sector regulators appear to be unsure about why they should allow these new market entrants, and how they should be licensed.

Myanmar requires a financial system built to facilitate the financing of agriculture, and to serve the needs of a large, dispersed rural population. Bank regulations and misunderstandings about them have discouraged commercial banks from lending to the agricultural sector. Too much attention has been paid to the drafting of rules and regulations such as those that require banks to follow CBM-mandated loan policy to supply credit to the agriculture sector. Too much effort has gone into drawing distinctions between the different types of financial providers, commercial banks vs. MFIs vs. cooperatives which among other effects, creates barriers to competition between different kinds of financial providers, competition that would benefit consumers. (The Impact of Financial Regulations on Agriculture in Myanmar by ROGER THOMAS MOYES and KENNETH SHWEDE)

CHAPTER IV

SURVEY ANALYZING ON MADB LOAN FOR RICE PRODUCTION

4.1 Survey Profile

Dedaye township is a township in Delta area under Pyapon district, Ayarwady Region. It is located between North Latitude 16 degrees 07 minute 30 second and 16 degree 28 minute 53 second, between East longitude 95 degree 40 minute 54 second and 96 degree 04 minute 47 seconds with area of 367.72 square mile, 26.77 mile length East to West and 24.58 miles length South to North. As the border at East, Kungyangon township, Yangon region, Pyapon township at West and Kyaiklat township at North. Andaman sea is at South. (See in Figure 4.1) Population is nearly 105,000 live in 93 village tracts. There are 12170 farmers grow 178,270 acres in Monsoon and around 71,300 acres are grew paddy in both season, Monsoon and Summer. Two rivers are across Dedaye township and a lot of stream pass through and so, main transportation in local is by boats. One main road across the area connect Pyapon and Kungyangon , led to city, Yangon. Dedaye township is Agriculture township, main production is rice and some fishery. Dedaye township socio-economy depend on farmers' income that mean paddy yield and paddy price.

4.2 Survey Design

The survey aim to examine the extent, channel and pattern of MADB loans to farmers and the impact of loan on farmers who grow paddy in Dedaye Township. The survey focus on farmers who grow paddy and rely on agriculture. In Dedaye township, there are two type of paddy growing, monsoon crop and summer crop. So, it select twelve villages, six villages relying on only monsoon crop and six villages grow both seasons. Before taking interview, collected interviewers and explained each questions. Then meet village's leaders and explained why have to interview to farmers and wrote down the farmers list and selected randomly. The target farmers are 160 from ten villages and went home visit and interviewers explained to farmers

before interview. Six Focus discussion Group were conducted with farmers, at least participated five to eight farmers. There was an interview with Daw Thandar Zaw Min, manager of MADB bank, Dedaye. Other two interview held with four traders and a private bank manager.

Figure (4.1) The Map of Dedaye Township



Source from MADB Bank, Dedaye

4.3 Survey Result

Survey result is described under the titles of Farmer’s Seasonal Calendar, Loan Disbursed from Dedaye MADB Bank, Cultivation Cost, MADB Loans Accessibilities, Farmers and Their Accessibilities, Farmers Investment (Cultivation Cost and Loan Accessibilities), Trend of Paddy Price, Productivities and Amount for Loan and Other Challenges.

4.3.1 Farmer’s Seasonal Calendar

Farmers start their jobs after Water Festival, mid-April. They prepare machine and other equipment’s for Monsoon season cultivation. The seasonal workers also start for preparation. Because they plot farms in Mid-May. The critical period the farmers need loan is from May to July, because they need the cost for land preparation plotting, breeding and to purchase fertilizers. See blow table. Here, the question is why the farmers don’t receive it in right time. Farmers took ready loans from local lenders to start cultivating. If farmers wait and start MADB loan, the time are late and all might waste.

Figure (4.2) Farmer’s Seasonal Calendar

April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
			Fertilizing								
Preparing			Breeding								
		Plotting			Weeding				Harvesting		

Source: Focus group discussion

4.3.2. Loan Disbursed from Dedaye MADB Bank

MADB bank, Dedaye disburse loan in May to August by MABD law mandate. But, bank actually offer loans to farmers in July and August. Because banks rule, loans can disburse after have collected 80% of resettlement from farmers by village tract. Bank announced to resettle from January May. Some farmers cannot pay back MADB loan in time because of some problem like paddy damage by irregular rain and low yield. So MADB bank disburse loan in July and August. (See Table 4.2)

Table (4.2) Disbursed Loans amount from Dedaye MADB Bank

	Loan Amount (millions)	Disburse period
2014-2015 Monsoon	25,844.25	June to August
2015-2016 Monsoon	25,915.00	June to August
2016-2017 Monsoon	25,706.06	June to August
2017-2018 Monsoon	26,192.40	June to August
2018-2019 Monsoon	25,857.00	June to August

Source: MADB bank, Dedaye

4.3.3 Cultivation Cost

. Farmers spent from 265,000 kyats to 285,000 kyats (including harvesting cost). The cost depend on using Machinery like big tractor and combine-harvester. If there are not available by ground situation, transportation service, weather and local condition, farmers harvest using manpower, thrasher and bullock cart. Farmers working more steps, more time and more losses. This cost is normal situation. If insect damage or the weather is hard, the cost are more and damage to paddy.

Table (4.3) Average Cultivation Cost per Acre

Bund Renovation	20,000
Seed (1.5 bucket)	18,000
Plotting Cost (two time)	45,000
Weeding /Transplanting	32,000
Fertilizer *	77,000
Labor	20,000
Harvesting	50,000
Sun drying + storage	8,000
Total	270,000

* Nitrogen 50 kg =32,000

T-super 50 kg =27,000

Sulphur 25 kg =18,000

Total = 77,000

(Source FGD)

4.3.4 Farmers and Their Accessibilities

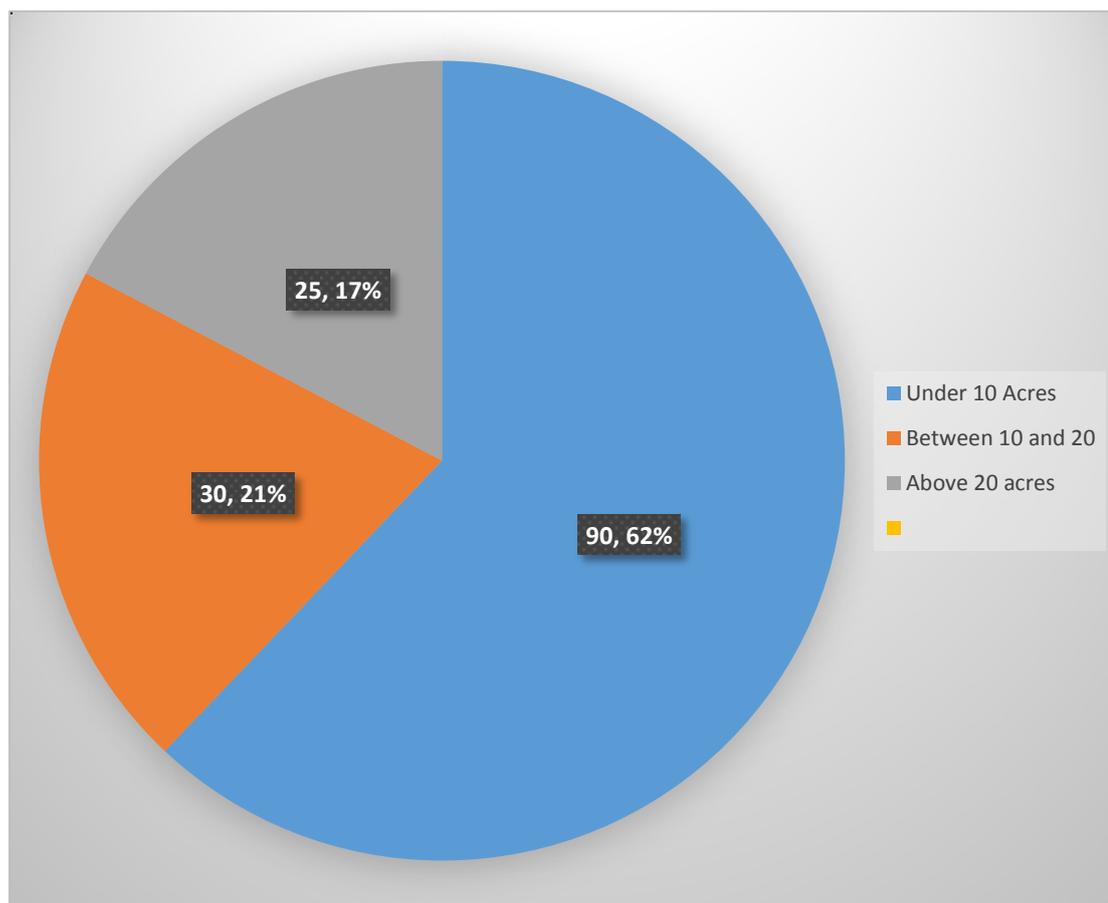
I collect data of 155 farmers from 11 villages. I divide three classes generally on their owned farm area. 90 farmers, 63.3%, own under 10 acres, 30 farmers, 20%, own between 10 and 21 acres and 25 farmers, 16.7% farmers own above 21 acres. (See Figure 4.2)

Table (4.4) Farmer's Accessibilities

	Owned acres per person	No; Farmers	Total Owned Acre	No; Family Members
Smallholder Farmers	10 acres & Under	60	606	343
Medium Farmers	Between 10 & 21	30	462	118
Large Farmers	Above 21 acres	25	902	88

Source Survey Data

Figure (4.3) Farmer's Accessibilities



Source:

4.3.5 MADB Loans Disbursing

MADB Bank mandated time to disburse is May to June. But in the order and budget situation, loans are disbursed to farmers in Mid-June to August. Resettlement period is January to May. Some farmers could not resettle in time because of some causes like paddy field damaged by insect or weather, family health, unexpected causes. MADB bank start to disburse after getting 80% of resettlement per township and the highest % of resettle village tract are included in first priority. Some farmers repay in later. They spend this loan for long period because they would get local loan with high interest rate. So the resettle time is late and disburse also not in right time. The MADB loans disburse in mid-June to August.

MADB loans rates are not same. There are 1.5 lakh per acre to ten acres and under. If the farmers own over ten acres, they would only get 15 lakhs per farmer. In other rule, if there are two or three farmers in one family who these farmers own farm separately, only one farmer chance to get loan. The interest rate is 8% per year but saving is 8%. So total is 16%. The farmers know that the interest is 16%.

4.3.6 Farmers Investment (Cultivation Cost and Loan Accessibilities)

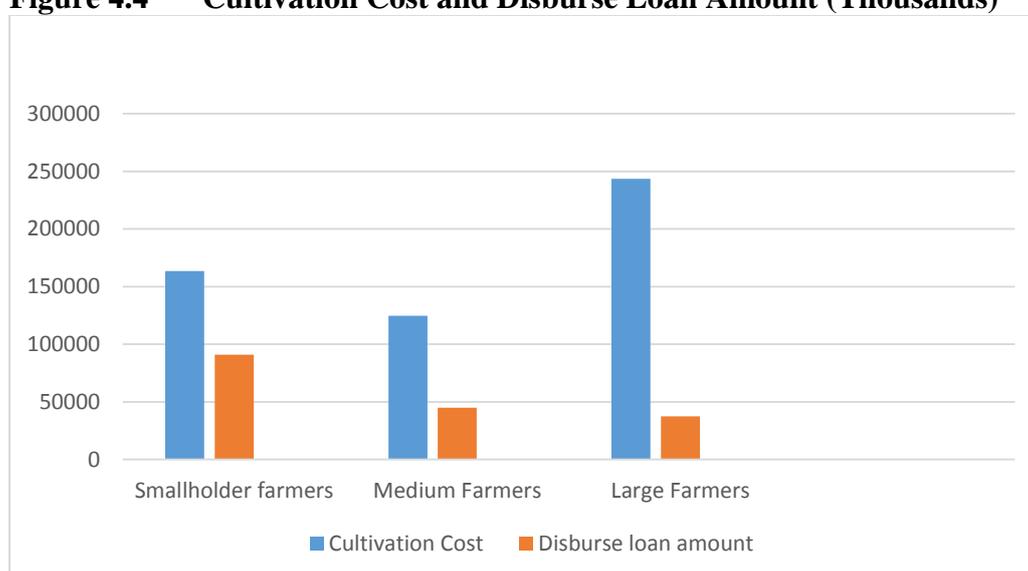
The actual cost per acre is average 270,000 kyats. (In the table 4.3) MADB bank offer loans rate is 150,000 kyat per acre. MADB loan are not enough for cultivate. The loans are disbursed in mid-June to August. Farmers started preparation after water festival, mid-April. Therefore farmers try to get money from local lender. Farmers get loan from them with high interest rate 60% to 72% per annual (local call 5% or 6% per month) and agree to pay back after harvesting. Local loan available anytime they need. However farmers want to get MADB loan at the right time. They settle loan early on February but the bank manager said all the farmers from village tract to settle together. If someone has not pay back, they must wait to August. It is impossible. It mean some person get trouble every year because of weather or insect or something else. These farmers are late to pay back to bank. Under these law, every year farmers get loan not at the right time, take loan from local lender, and then there is to sell paddy after harvest to settle local loan. (See Table 4.2 and Figure 4.2)

Table 4.5 Cultivation Cost and Disburse Loan Amount

Cost and Loan	Cultivation Cost	Disburse Amount	Accessibilities (%)
Small-holder Farmer	163,620,000	90,900,000	55.55 %
Medium Farmers	124,740,000	45,000,000	36.07 %
Large Farmer	243,540,000	37,500,000	15.40 %

Source; Survey Data

Figure 4.4 Cultivation Cost and Disburse Loan Amount (Thousands)



Source: Survey data

4.3.7 Trend of Paddy Price

In every year, paddy price are lowest in December and January. At these month, farmers harvest paddy field, drying and mostly are sold out. The price is going on without noticeable to May and June. During last five

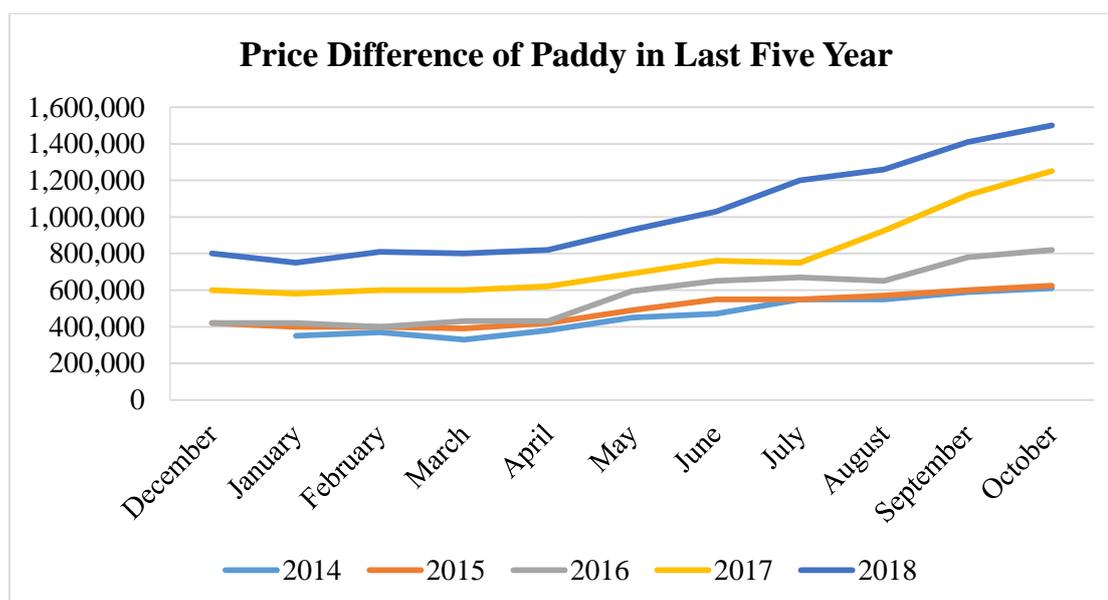
According below figure and table, the paddy price is very low in December and it is highest in October. The price is a little rise up till to June but July to October is quickly rise up

Table (4.6) Price Difference of Paddy in Last Five Year

Monthly	2014	2015	2016	2017	2018
December	-	420,000	420,000	600,000	800,000
January	350,000	400,000	420,000	580,000	750,000
February	370,000	400,000	400,000	600,000	810,000
March	330,000	390,000	430,000	600,000	800,000
April	380,000	420,000	430,000	620,000	820,000
May	450,000	490,000	595,000	690,000	930,000
June	470,000	550,000	650,000	760,000	1,030,000
July	550,000	550,000	670,000	750,000	1,200,000
August	550,000	570,000	650,000	9250,000	1,260,000
September	590,000	600,000	780,000	1,120,000	1,410,000
October	610,000	625,000	820,000	1,250,000	1,500,000

Source: These price record from GRET and WHH Bogalay

Figure (4.5) Price Difference of Paddy in Last Five Year



Source: These price record from GRET and WHH Bogalay

4.3.8 Productivities and Amount for Loan

Most of farmers, especially small holder farmer, invest with local loans for paddy growing in every years. They agree with loan lenders that farmers would resettle the loan after harvesting and selling paddy. So most of farmers sell out paddy for loans in December and January. Because farmers start harvesting the paddy field

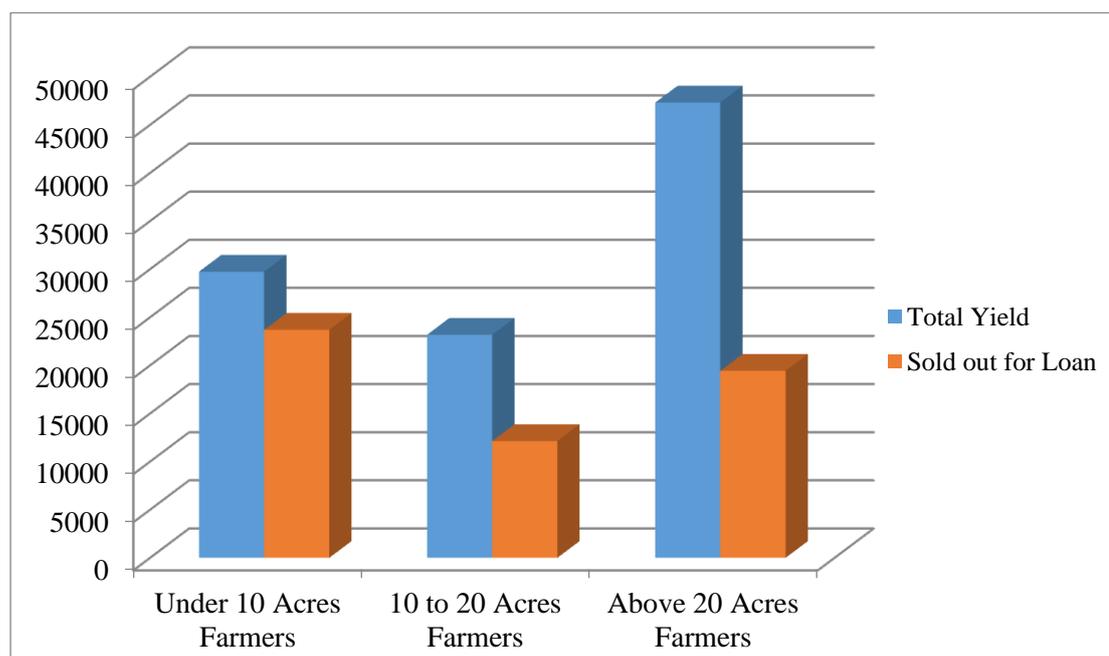
in November to January. In these months, the paddy is lowest in almost every year. But the farmers must sell paddy to resettle the loans by their agreement. (See. Table (4.6) and Figure (4.4))

Table (4.7) Productivities, Amount for Loan and Period

	Total Product - ivities (Basket)	Amount for Loan (Basket)	Sold out Period	% of Product -ivities
Smallholder Farmers	29,733	23,690	Nov to Jan	79.68 %
Medium Farmers	23,180	12,130	Nov to Jan	52.32 %
Large Farmers	47,300	19,420	Nov to Jan	41.05 %
Total	100,213	55,240	Nov to Jan	55.12 %

Source: Survey data

Figure (4.6) Total Productivities and Sold out Amount for Loan



Source: Survey data

4.3.9 Challenges from Farmers

Accessories' Qualities

Farm accessories like fertilizers, pesticides, insecticide, herbicides are low quality and danger to human and animal. Most of them are imported from China. Most of machinery are also imported from China. The qualities are low and they are damaged in short period. Farmers cannot assume to work load and waste time but those are cheaper than other countries product. Most of fertilizer are actual trade-mark brands. Some of these damage to soil, pesticides to human and animals and herbicides to soil and food.

Seed

Seeds availability is critical for quality rice production. Most of farmers use seeds from their field or from neighbor farmers. These seed age is over and low quality. Some farmers understand to use pure seeds but it is difficult to get quality seeds. Seed farms are limited and a few only. Their products cannot fill up the needs of farmers. Private seed production companies are also a few only. Government mandate law for Seed Production. It is block to seed production.

Market

Myanmar rice production is limited and it is not reach highest yield rate. There can produce more by using modern technic and new hybrids seed. Basic food of Myanmar people is rice, 80% of product for inland and 20% only for export. But export rice is low quality and market is limited. In Asian countries, Myanmar export rice quality is lowest. Some export rice are for animal and raw material for other food production. Most of rice export are to China by legally and illegally. Export depending on only one nation is very danger.

Loans Source

Most of farmers invest with loans in rice production. MADB Loans are not right time and insufficient. So farmers rely on local loans. These loans are with high interest rate from 60% to 84% per annual. This interest rate is very danger for farmers. If the farmers damage paddy in a season (a year) by weather or pest, they cannot resettle within three year. Sometime, they resettle selling by farm. So the farmers never think to take ricks. Farmers get loans from local lenders, but it is also limited.

CHAPTER (V)

CONCLUSION

5.1 FINDINGS

After analyzing in chapter 4, farmers start preparation to growing paddy on monsoon season at mid-April, after Water Festival. It is firstly invest in farm. And then bund renovation, land preparation, plotting, seed bed preparation (if using transplanting method), weeding, transplanting, feeding fertilizer, spreading pesticide, controlling water for final stage are going on to at September. Later, harvesting, sun-drying, selling and storing are mid-November to end of January. MADB disburse loans in August. At this time, farmers have invested with local loans. And MADB Loans rate are 150,000ks per acre for small-holder farmers who own under 11 acres. Farmers charge 270,000ks in monsoon, not including harvesting and sun-drying cost.

Farmers start harvesting mid-November to end-January. Some farmers use combine-harvester machines, some harvest by hand and using threshers and some thresh by bulls. After sun-drying, farmers sell paddy to resettle to local loans. Because farmers agreed with local loans lenders at borrowing time that farmers must resettle the loans after harvesting. Unfortunately, during this period, the paddy price is lowest in every years (2014 to 2018). Most of farmers, especially smallholder farmers, sell the paddy for loans with lowest price. These amount are 55.12% of total productivities. Farmers face other challenges like accessories' qualities, seeds and markets.

In chapter 3, MADB loans offer to farmers by government subsidies. There are six objectives on loans disbursing. These objective are to develop of agricultural, livestock and rural socio-economic enterprises in a simple procedure, to promote rural banking, to encourage saving habit in order to bring about it self-help spirit among rural population, to support socio-economic development in the rural area, to cultivate habit of using banking service and to develop banking business.

5.2 SUGGESTION

Agriculture has been considered as one of the most economic sectors of all economies, especially in developing nations. The agriculture sector is crucial to not only internal food security, but also employment growth and poverty reduction. Agriculture is now considered as an economic sector, not only in rural areas, but also in urban ones. Additionally, agricultural production in rural area still accounts for a large proportion, contributing to the employment of the majority of workers. However, farmers in rural areas in developing countries still find it difficult to access credit to enhance their production. The difficulty in raising funds in rural zones will lead to a decline in output, an impact on GDP, and national food security in poor countries. Thus, access to rural credit markets is considered to be an important factor in economic development, especially for low-income households.

Myanmar is agriculture country. Myanmar farmers grow paddy 6,167,000 – hectares in Monsoon season and 994,000 hectares in Simmer season. There are more net swan area in Monson season. But there are a lot of ricks on paddy growing in Monson. The main cultivation area are Ayarwady and Bago regions. Both regions are more rain-fall areas in Myanmar. It is difficult to control water level. So, cultivation areas in Monson season are not sure and 2% to 5% are damaged by rain or floating I every year. Monson paddy production per acre is lower than Summer paddy production.

Most of Myanmar government tried to promote Agriculture Productivity. They tested a lot of project and spent budget. Now, government subsidize to Agriculture sector by Seasonal Loans with low interest rate to provide farmers to cover cultivation cost. Government rise up amount per loan 7,000 kyats per acre at 2003/2004 budget year to 150,000 kyats per acre at 2008/2019 budget year (not all acres, it is shown in chapter 4). It is not sufficient amount for cultivation cost. Amounts of MADB loans cover 55.55 % cultivation cost of smallholder farmers, 36% of medium farmers and 15.4% of large farmers. So farmers invest paddy growing with local loans and high interest rate (60%-84% per annual).

MADB banks disburse loan by rule and regulation. Bank cannot offer to first priority to farmer's needs and cannot disburse individually to farmers. MADB first priority is to get most resettlement in every year. Bank disburse loans to village tract

level. So MADB cannot disburse the loans to farmers with sufficient and right time. Most of farmers rely on local loans for cultivation cost. It is far a ways from MADB aims and objectives.

Most of farmers, especially 80% of smallholder farmers, got loans for cultivation costs with agreement to resettle after harvesting. The farmers sell out paddy after harvesting and sun-drying in December and January. The sold out amount of farmers is over 50% of total productivities. During only two month, large amount of paddy are in the markets, the supply is over to demand, the price of paddy decline to lowest price called the basic price. So, the lowest price are in December and January. But the farmers must sell out their product with lowest price because of agreement with local loans lenders. Farmers always lost the benefit because there are unstable price in every years.

Myanmar has a long tradition of rice production. In the years immediately prior to World War II it was the largest rice-producing nation in the world, and it continues to be one of the ten largest rice-producing countries in terms of total yield. . Rice exports grew to 1.2 million tons by 1890, to 2.4 million tons in 1920-24 and 2 tons in 1962, then it was declined to 35,000 tons in 1995, during Socialism Policy and Army Government.

Agriculture sector development is very important for Myanmar Development. All of past projects to promote Agriculture product targets on technology, department activities and others. They neglected main producer farmers. Most of farmers invest in with local loans with high interest rate. So farmers don't concern to grow paddy with new technology. The farmers don't want to take the ricks. Farmers grow paddy traditionally, it is sure for regular yields.

Myanmar farmers invest I farms with loans from MADB and local loans. MADB loans are low interest rate but cannot disburse in right and insufficient. MADB system is centralization system. MADB disburse loans in May to August in the whole Myanmar. But, farmers grow rice with flow of weather, not in same time from one region to others. So, the period of loans need of farmers are not same even in same like Ayarwady or Bago. MADB loans disbursing system is not suitable for farmers and miss to MADB aims. On other hand, farmers are available loans any time when they need from local lender. These loans are high interest rate and must resettle after harvesting. Most of farmers sell paddy suddenly after harvest. In the market, the supply rice are more than demand rice. The paddy price get down to lowest price. It is

call basic price. The farmers lose the profit that farmers should get. Let a farmer invest paddy growing with local loan. If his farm damage by something like weather or pest, it is very danger for this farmer and it is very difficult to resettle, maybe, he must sell his farm. So farmers cannot take the any ricks.

I assume that Private Banks serve to strength of both MADB bank and local lender. MADB strength is low interest rate. Local loans are sufficient amount and individually get in right time. Myanmar government can only spend 5% of total expenditure and still weak in research and quality test centers. So government cannot offer the loans to fill up farmers invest in farms. Credit to the private sector in Myanmar amounts to only 7.9 percent of GDP, a low figure compared to other neighboring countries, such as such as Bangladesh (48.6), China (127.4), India (50.6), Lao PDR (20), and Thailand (108.6). There are four main facts to solve farmers' difficulties and to improve Myanmar Agriculture Sector Development.

- (1) Government don't directly offer loans (MADB Loans) to farmers as subsidize. Government empower to private banks and lenders with institutions , Laws and Regulation to lend loans to farmers
- (2) Government support subsidize to traders to expend Export Markets
- (3) Government promote and monitor Private Seed Production

Finally. Following are conclusions of papers from other countries for lesson learns. One of the major problems inhibiting the development of rural finance is the unclear role of government. The Government should often intervene in agricultural credit markets, e.g. by providing guarantees to banks for loans, by setting up credit institutions special for agriculture and by subsidizing credit to agricultural producers. In Armenia the role of government in contributing to the development of the agriculture credit markets is relatively low. The government should create an appropriate climate for the formation of the specialized agricultural credit institutions, which are widespread in Western European countries.(The Role of Specialized Agricultural Credit Institutions in the Development of the Rural Finance Sector of Armenia: Case of Credit Clubs By Vardan Urutyanyan, Mariana Aleksandryan, Vardges Hovhannisyan)

In this study, the determinants of access to bank credit by smallholder farmers were analyzed using the logit regression model because the dependent variable, having access to bank credit, is a categorical variable with two possible outcomes. The results show that access to bank credit is largely determined by the value of assets

invested in farming activities, gender and education of the smallholder farmers. This study contributes to existing knowledge by showing that value of assets invested in farming activities, gender, and education significantly explain the probability of smallholder farmer having access to bank credit. Furthermore, one of the findings of this study is that the value of assets invested in farming activities has a significant relationship with access to bank credit. Thus, this study suggests a valid loan selection criterion should include value of assets invested in farming activities. (Access to bank credit by smallholder farmers in Tanzania: a case study By Nsubili Isaga , School of Business, Mzumbe University, Tanzania)

An overview of Vietnam rural credit markets and its characteristics of limited market participation, government intervention, and segmentation have been clearly indicated. Some different determinants of Vietnam rural credit market access from foreign studies are highlighted as ethnic, urbanized commune, and value of livestock/livestock holdings. The factor of social capital factor is found in most Vietnam studies. The socio-economic impacts of credit access are considered in both foreign and Vietnam rural. Although positive relationship among credit access, output production, productive efficiency, and total household income are found in most papers; credit also has positively significant impacts on only non-farm income. The poor farmers with their main income from agricultural activities are likely to be excluded from formal markets. This is due to vulnerable farming activities and inefficient in agricultural policies. Accordingly, some studies have shown that credit access, especially formal access, is not efficient in reducing poverty. The results of this study have a number of implications, which can be helpful to decision makers, especially in developing countries as well as in Vietnam. Credit policies should be adaptable to different household groups. (Access to Rural Credit Markets in Developing Countries, the Case of Vietnam: A Literature Review by Ta Nhat Linh , Hoang Thanh Long , Le Van Chi , Le Thanh Tam and Philippe Lebailly)

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a|| No need to answer if invest by yourself (b) Other source

	When available	Interest rate	When Pay back	How to get (easy/hard)	Remark
NADB					
Organization					
Private/local					
Loan with					
Other					

12. When start harvesting ()

13. When finish harvesting ()

14. Total yield ()

15. How many baskets store for seed/ food/ extra ()

16. Which price did you sold out

Varity	Baskets	Price	When	Why	Remark

17. Last year, do you remember basic and highest prices (/)

18. When you sold out, you got the price lowest or highest ()

19. If you sold out with lowest price, why? ()

20. Do you have extra paddy to sell ()

21. Did you buy any facilities after you sold out paddy

Example Motor bike , TV ()

22. Do you have any loan to pay back ()

23. If you have enough money to spend, how would you manage your paddy

(a) Store to get higher price (b) sold out after harvest ()

24. Please give suggestion on each loans

(a) MADB loan _____

(b) Organization loan _____

သုသေသနစာတမ်းအတွက် အချက်အလက်များကောက်ခံခြင်း

(၂၀၁....၊ မိုး/ခွေ စပါးစိုက်ပျိုးမှု)

အမည်။

ဖုန်းနံပါတ်။

ကျေးရွာ။

ကျေးရွာအုပ်စု။

မြို့နယ်။

၁။ မိသားစု အတူနေ ဘယ်နှစ်ယောက် ရှိပါသလဲ။

()

၂။ အလုပ်လုပ်နိုင်သူ ဦးရေ

()

၃။ မိမိ ဦးရေ

()

၄။ ကျောင်းသားဦးရေ

()

၅။ အခြားဝင်ငွေ

လုပ်နိုင်သူဦးရေ	တလပျမ်းမျှဝင်ငွေ	ဝင်ငွေရသည့်လ	တနှစ်ဝင်ငွေ	မှတ်ချက်

၆။ အခြားကုန်ကျစရိတ် (သိသာသော)

	တစ်လပျမ်းမျှစရိတ်	ကုန်ကျသည့်လ	တနှစ်ကုန်ငွေ	မှတ်ချက်
ကျောင်းသား				

၇။ ပြီးခဲ့သည့်ရာသီ စပါးတွင်စိုက်ပျိုးခဲ့သော ဧက။

()

၈။ စပါးစိုက်ပျိုးမှု လုပ်ငန်းစဉ်များ

လုပ်ငန်းစဉ်	စတင်သည့်လ	ပြီးဆုံးသည့်လ	မှတ်ချက်
ထွန်ယက် မြေပြင်			
ပျိုးထောင် ပျိုးကျ			
ကောက်စိုက်			
ပေါင်းနတ်			
မြေဆီကြဲ			
ဆေးဖြန်း			
အခြား			

- ၉။ ဘယ်လောက်ကုန်ကျသလဲ။ (အားလုံးပေါင်း) ()
- ၁၀။ တစ်ဧက ပျမ်းမျှ ဘယ်လောက်ကုန်သနည်း။ ()
- ၁၁။ စိုက်စရိတ်ကို ဘယ်ကရသနည်း။ ()

က။ ကိုယ်ပိုင် (ချေးငွေလုံးဝ မယူပါက ဇယားဖြေရန်မလို) (ခ) အခြား

	ချေးယူသည့်လ	အတိုးနှုန်း	ပြန်ဆပ်ရသည့်လ	ရရှိနိုင်မှု (ခက်ခဲ/လွယ်ကူ)	မှတ်ချက်
စိုက်ဘက်					
တစ်ဖွဲ့ဖွဲ့ဆီမှ					
အလွတ်ချေးယူ					
တခုခုပေါင်နှံ၍					
အခြား					

- ၁၂။ မည်သည့်လတွင် စတင်ရိတ်သိမ်းပါသလဲ။ ()
- ၁၃။ မည်သည့်လတွင် စတင်ရိတ်သိမ်းပြီးပါသလဲ။ ()
- ၁၄။ စပါးဘယ်လောက် ထွက်လဲ။ ()
- ၁၅။ စပါးဘယ်လောက် ကျန်သေးလဲ (ဝမ်းစာ၊ မျိုးစပါး၊ ရောင်းစပါး) ()
- ၁၆။ စပါးဘယ်လောက် ဘယ်ဈေး ဘယ်လကရောင်းခဲ့ပါသနည်း

စပါးအမည်	ပမာဏ(တင်း)	ရောင်းဈေး	ရောင်းသည့်လ	အကြောင်းအရင်း	မှတ်ချက်

- ၁၇။ ယခင်နှစ်က အနိမ့်ဆုံးဈေးနှင့် အမြင့်ဆုံးဈေးကိုပြောပေးပါ။ (/)
- ၁၈။ သင်ရောင်းခဲ့စဉ်က စပါးဈေးသည် အမြင့်ဈေးလား၊ အနိမ့်ဈေးလား။ ()
- ၁၉။ အဘယ်ကြောင့် ဈေးအနိမ့်ဖြင့် ရောင်းချရသနည်း။ ()
- ၂၀။ ရောင်းရန်းစပါး ကျန်ပါသေးသလား။ ()
- ၂၁။ စပါးရောင်းရငွေဖြင့်လူ့အသုံးအဆောင်ပစ္စည်းများ ဝယ်သေးသလား
ဥပမာ။ ။ ဆိုင်ကယ်၊ တီဗွီ ။ ()
- ၂၂။ ပေဆပ်ရန် အကြွေး ကျန်ပါသေးသလား။ ()
- ၂၃။ အကယ်၍များ သင့်တွင် ငွေပို ငွေလျှံရှိမည်ဆိုပါက လယ်ထွက်စပါးကို
က။ သိုလှောင်မည်လား၊ ခ။ ယခုကဲ့သို့ပဲရောင်းချမလား။ ()

၂၄။ ချေးငွေတစ်ခုချင်းစီအပေါ် မှတ်ချက်ပေး ပေးပါ

(က) စိုက်ဘဏ်ချေးငွေ _____

(ခ) အဖွဲ့ တစ်ခုမှ ချေးငွေ _____

(ဂ) အပြင်မှ အလွတ် အပေါင်တစ်ခုချင်းစီ _____

ဘာများဖြည့်စွက်ပြောကြားချင်ပါသလဲ
