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CAMBODIA RICE FEDERATION

RESEARCH PAPER

ON

AGRICULTURE FINANCING

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Foreword

Agriculture is one of key economic pillars of Cambodian economy, and is considered a priority by the Royal Government. The vision for agriculture development is included as a component in the Rectangular Strategy Phase III, aimed at increasing value added of production and export of rice, which is regarded as the “white gold” of Cambodia. The Royal Government has set out an optimistic direction to promote more rice export to its trading partner countries. As a result, farmers’ cultivated land, infrastructure, and irrigation have been expanded and improved over time while paddy seeds have been refined, agriculture financing increased, and rice export markets expanded. Yields have gradually increased, presenting opportunities for Cambodia to meet domestic demands as well as efforts to enhance rice export competitiveness with its neighboring countries and within the region.

Despite this progress, participants in the paddy-rice production chain encounter some factors that hinder paddy-rice production as well as realization of the rice export target of the Royal Government of Cambodia. Challenges pinpoint main solutions, such as strengthening the irrigation system in response to the climate factor, enhancement of agricultural knowledge and techniques, continued seeking of export market, and increased supply of financial resources. Therefore, rice sector stakeholders, both public and private, need to pay closer attention and to perform their roles more effectively. To this end, the National Bank of Cambodia, as a supervisory authority to the banking system, which constitutes financing institutions, conducts this research with attempt to understand challenges faced by participants in the paddy-rice production chain, including farmers and rice millers as well as the agriculture financing by banks and microfinance institutions.

We would like to convey our appreciation to farmers, rice millers, banks and financial institutions for their time in providing the information and data for this study, and in particular, the Cambodia Rice Federation for their collaboration in coordinating the field visits. We hope that the findings will be used as a basis to expand knowledge among researchers, the general public, and especially, will serve the National Bank of Cambodia and other relevant ministries-agencies, and institutions in developing their respective policies in support of the Paddy Production and Rice Export Promotion Policy of the Royal Government of Cambodia.

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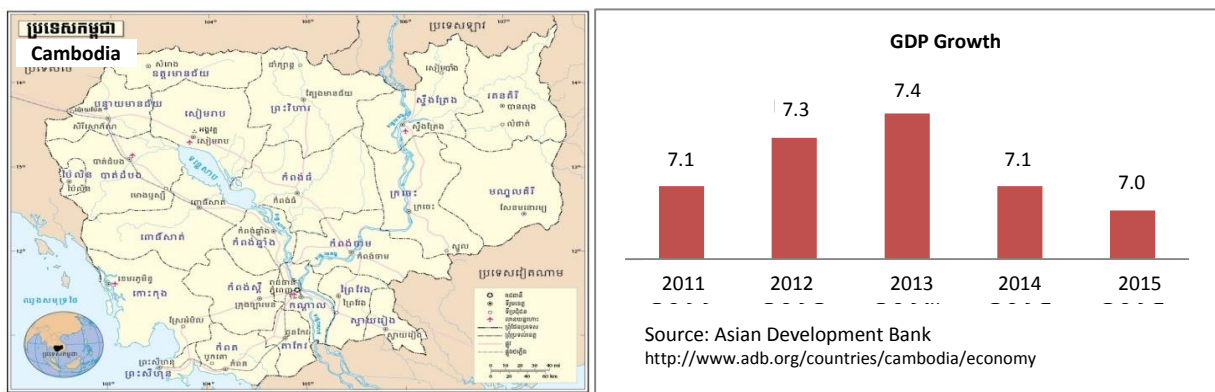
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Agriculture Financing

I. Introduction

Cambodia is a Southeast Asian country with plains in the center and surrounded by mountains and plateaus. In that, approximately 25,069 km² of land area are plains; 67,668 km² surrounds the Tonle Sap Lake, which is a main source for supplying fertile soil for agricultural activities; while mountains and plateaus constitute the other 68,061 km². Economic growth is remarkably high with an average rate of 7%.

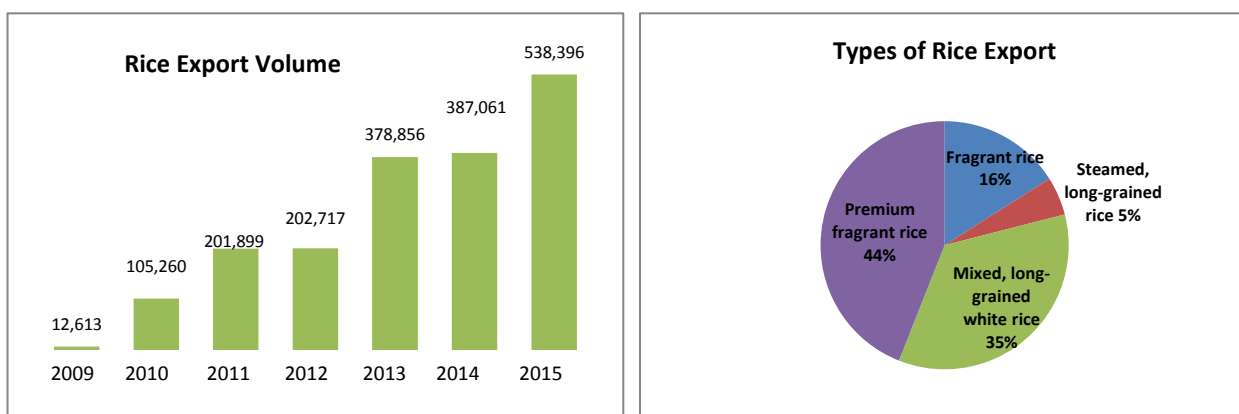
Figure 1: Cambodia's Geographical Location and Gross Domestic Product (GDP) Growth



According to the National Institute of Statistics (2015), Cambodia's economy comprised three key sectors; agriculture (26.6%), industry (27.7%), and services (39.8%), while figures from the Food and Agriculture Organization show that in 2013 agriculture generated employment up to 64.6% of the total labor force. With respect to rice, the Secretariat of the One Window Service for Rice Export Formality (SOWS-REF) reveals that Cambodian rice sector had grown significantly compared to that before 2010, as reflected by the increasing rice export in 2009 (12,613 tons), 2010 (105,260 tons), 2011 (201,899 tons), 2012 (202,717 tons), 2013 (379,856 tons), 2014 (387,061 tons), and 2015 (538,396 tons).

Against this backdrop, agriculture has been included as one of the four priority sectors specified in the Rectangular Strategy - Phase III of the Royal Government of Cambodia of the fifth legislature (2013). In this regard, further development of and increasing value added in agriculture include: (1) enhancing valued added of milled rice production and export, especially fragrant and organic rice and other high value agricultural products; (2) promoting livestock production and aquaculture to meet market demands; (3) encouraging investment in agro-industry; and (4) enhancing agricultural productivity, modernization, and commercialization.

Figure 2: Volume and Types of Rice Export



Source: Secretariat of the One Window Service for Rice Export Formality (SOWS-REF)

In the same regard, in 2010, the Royal Government of Cambodia developed a Policy on Promotion of Paddy Production and Rice Export with 2015 defined as the base year for achieving production of over 4 million tons of paddy and at least one million ton of milled rice for official export, and international recognition of Cambodian rice. Moreover, the Ministry of Agriculture, Forestry, and Fisheries (2013) indicated that during the last five years, cultivated land and paddy yields had increased rapidly from 2.6 million hectares and 7.17 million tons in 2008 to over 3 million hectares and 9.29 million tons in 2012, of which the surplus from consumption which could be exported equaled to 4.73 million tons of paddy, or 3 million tons of milled rice. This is a new potential opportunity for Cambodia to develop into a lead rice exporting country in the near future. However, the export capacity remains limited, requiring further attention from the Royal Government as well as all relevant stakeholders.

In 2015, loans by banks and microfinance institutions to agriculture equaled to US\$ 1,229 million and US\$1,065 million which accounted for 10.2% and 35.2% of their respective portfolios. These figures were higher than that of 2014, in which US\$953 million and US\$746 million worth of loans were provided by banks and microfinance institutions. Despite the increase in agriculture financing, views remain on the shortage of financial resources for the development of agriculture as well as the realization of the Royal Government’s rice export policy. To this end, the National Bank of Cambodia conducts this research which seeks to understand the state of agriculture in Cambodia and the financial needs to develop the sector further. Results obtained from this study research will be used to assist the National Bank of Cambodia in developing more effective policies. The research focuses on eight provinces that are the main paddy-rice producers, including Battambang, Prey Veng, Kampong Cham, Kandal, Kampong Thom, Takeo, Banteay Meanchey, and Siem Reap through in-field interviews with 99 farming households and 53 rice mills as well as 30 headquarter-interviews with banks and microfinance institutions.

This research is divided into four sections, including: (1) Introduction, which outlines the research purpose, scope, and methodology; (2) Overview of rice sector and financial sector, which reflects the agriculture sector development in Cambodia and banks and microfinance institutions' engagement in this sector; (3) Performance and challenges of farmers, rice millers, banks, and microfinance institutions; and (4) Conclusion and suggestions.

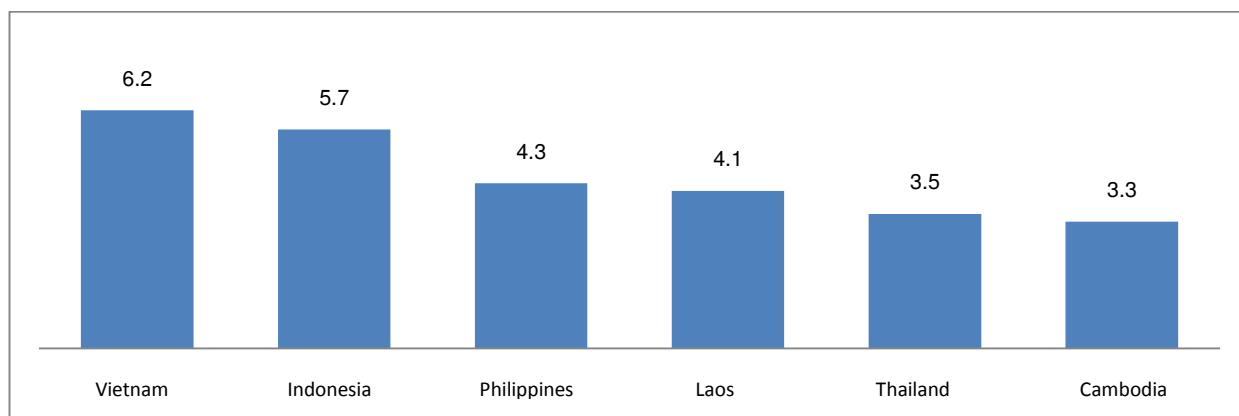
II. Overview of Rice Sector and Financial Sector

Most Cambodian farmers focus on rice with 75% of land is used for paddy cultivation. Paddy production, processing and market provide employment to approximately 3 million people or 20% of working-age population. Meanwhile, a large portion of paddy produced in Cambodia is exported to Thailand and Vietnam for milling, and then is distributed for domestic consumption or exported to other countries. This has caused loss of export opportunities for rice millers and traders in Cambodia and also a loss of employment for local people. Moreover, Cambodia's understanding of international rice market's standards and demands is limited due to lack of information (International Finance Corporation, 2015).

However, the establishment of quality assurance standards of "white rice" and "fragrant rice" since 2013 has enabled Cambodian rice to gain more international recognition and confidence from buyers across the globe. By strengthening farming techniques as well as milling process, not only the outputs and revenues for Cambodian rice industry have since increased but also its growing reputation in terms of fragrant rice production. As a proud result, Cambodian rice has been ranked the world best rice for three consecutive years during the annual World Rice Conference organized by The Rice Trader (TRT). Despite this, the Food and Agriculture Organization (2014) pointed out that Cambodia's productivity remained low compared with neighboring countries with an average paddy yield of 3.3 tons per hectare while Vietnam and Indonesia could produce up to 6.2 tons and 5.7 tons per hectare respectively.

The 2011 Policy on "Promotion of Paddy Production and Rice Export", Ministry of Agriculture, Forestry, and Fisheries, developed a plan of actions to respond and achieve defined objectives through increased productivity, in particular, crop intensification and agricultural diversification; focus on extension services and interventions to promote paddy production and transfer of appropriate techniques for farmers; increased research and refining of seeds to suit the land and climate, especially identifying the key rice seeds to meet market demands. Further, coordination and support for the private sector to enhance their processing capacity to meet the prescribed standard of the international market and the concentration of production is a necessary mechanism which require strong support and close attention.

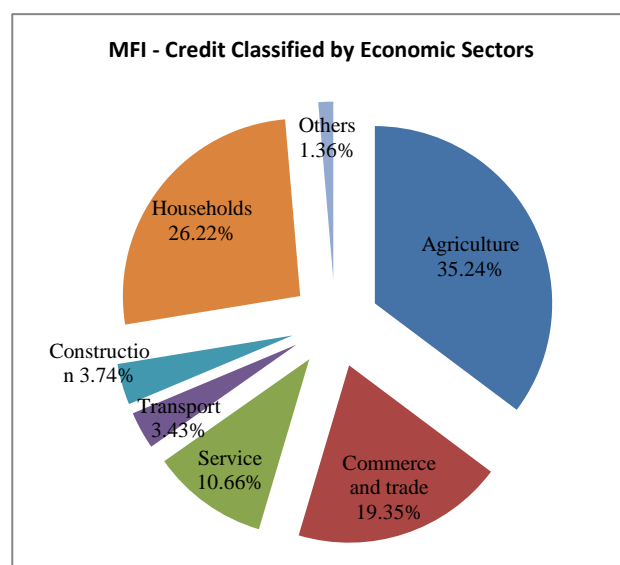
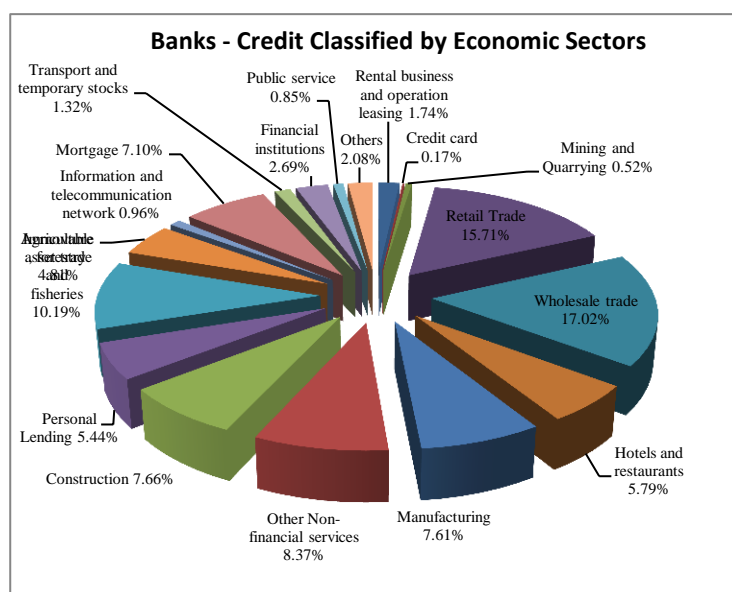
Figure 3: Paddy Production Capacity per Hectare (in million tons)



Source: Food and Agriculture Organization (FAOSTAT)

The financial sector in Cambodia is dominated by the banking sector, in which the total assets of banks and microfinance institutions in 2015 increased to US\$23.5 billion. At the same time, banks and microfinance institutions’ total credit has increased gradually to US\$14.7 billion, and is distributed to various sectors of the economy. Based on the National Bank of Cambodia (2015), banks’ credit was allocated to whole sale trade (17.01%); retail trade (15.73%); agriculture, forestry and fisheries (10.19%); other non-financial services (8.37%); manufacturing (7.61%); and owner-occupied housing (7.1%) while microfinance loans focused on agriculture (35.24%), households (26.22%), trade and commerce (19.35%), services (10.66%) and construction and transportation (7.17%). Altogether, this shows a total of US\$2.3 billion credit was made by banks and microfinance institutions to the agriculture.

Figure 4: Credit Classified by Economic Sectors



Source: The National Bank of Cambodia (2015)

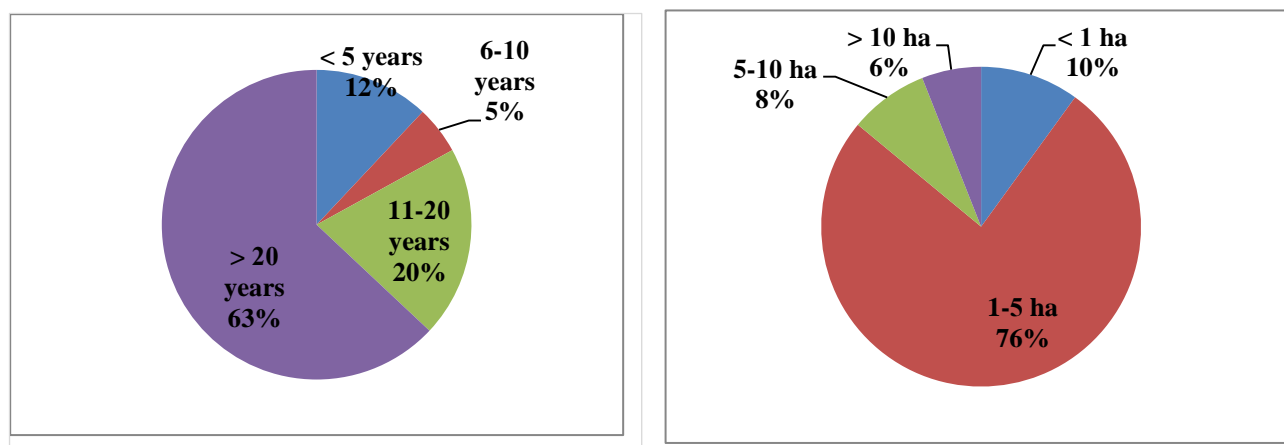
According to a World Bank’s 2013 study, about half of Cambodian agri-business used commercial banks’ financial service, and the level of usage varied according to firm sizes. In this regard, about 85% of firms using commercial banks’ service were large firms, and only 22% were micro firms. The study also revealed that most of rice sellers and input suppliers are micro and small firms, which covered about 86% of rice sellers and about 85% of input sellers while only about 3% of rice sellers and 5% of input suppliers were large firms.

III. Performance and Challenges Encountered by Farmers, Rice Millers, Banks and Microfinance Institutions for Rice Businesses

3.1 Performance and Challenges by Farmers

Rice cultivation has been practiced in Cambodia since a long time as evidenced since the pre-Angkor period. At present, most Cambodians are subsistent farmers involved in fishery, crop plantation, rice cultivation, and animal husbandry. Based on the research data, most farmers have long engaged in rice cultivation with most of them having approximately 20 years of experience, while only a small number of them have had less than 5 years of experience. Most of these farmers live in a family of 3-10 people. Living in an extended family makes it easy for them to help with the farming, while it is also difficult to seek new housing. For paddy cultivation, farmers use their own land passed down from their forefathers. Generally, the land size ranges between 1 ha and 5 ha, which provides an average yield between 1 ton and 5 tons per hectare. However, owing to favorable conditions of their living areas with sufficient infrastructure and good understanding of seed selection and cultivation techniques, 36% of these farmers could increase the yield to over 5 tons per ha. Farmers maintain a small amount of the yield for family consumption, while selling the rest 78% to rice traders.

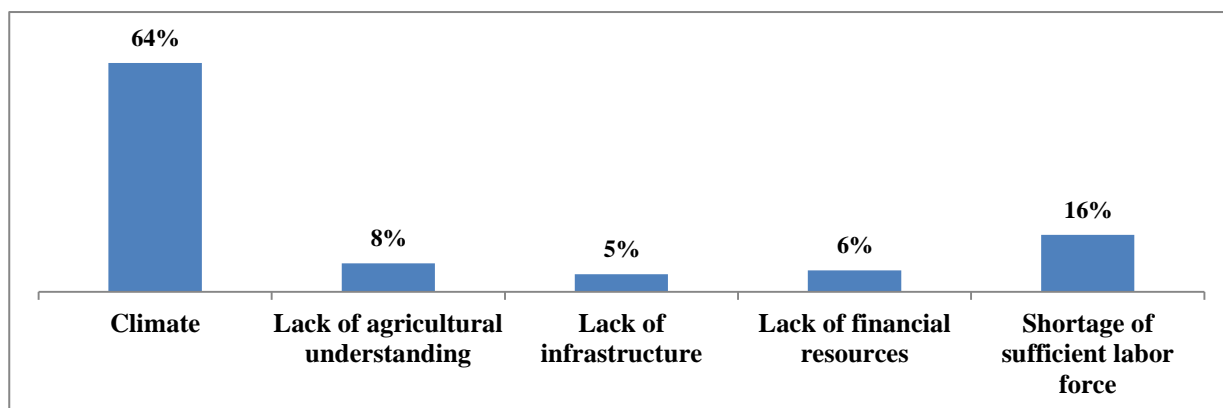
Figure 5: Experience and Households’ Land Size for Rice Cultivation



Source: Research data

However, majority of farmers expressed that the yields lower than expected due to a number of factors, including (1) seasonal effect (64%) as sometimes there was flood, and other times, drought; (2) insufficient labor (16%) because of family members' migration to neighboring countries where they could earn more for families than rice farming; (3) lack of farming knowledge (8%) as practice was based on the experience and knowledge handed down from parents and family members; (4) lack of capital to buy inputs for farming (6%); and (5) lack of infrastructure (5%), which made travel difficult and led to insufficient water for crops. This shows that the main challenge for farming is the climate factor.

Figure 6: Challenges Facing Rice Production



Source: Research data

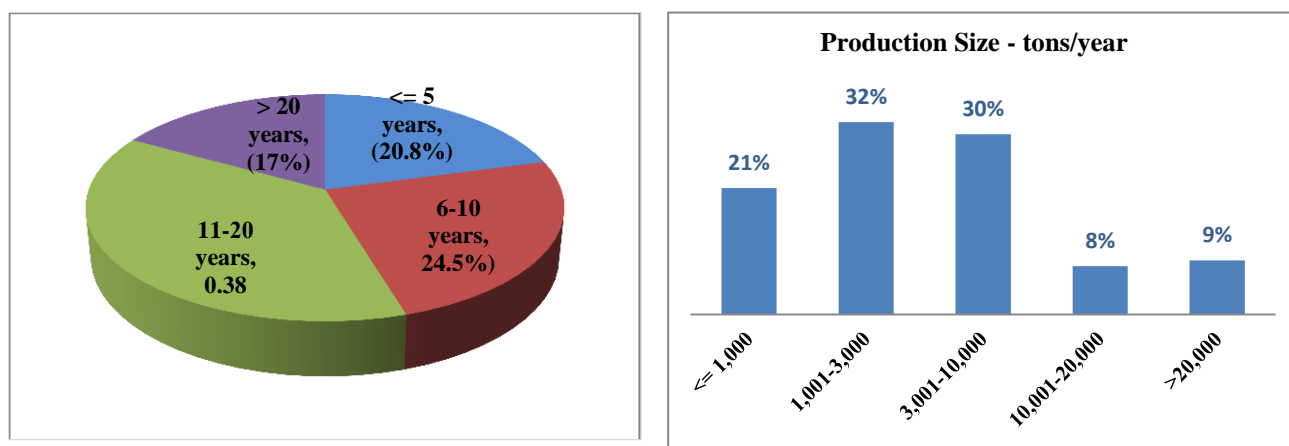
With respect to funding, 53% of farmers used their own capital while 25% used borrowed fund, and the other 23% used both. Among those farmers who did not use borrowed fund, 18% showed intent to borrow from banks and microfinance institutions. The reasons that made most farmers to opt for banks and microfinance institutions include the affordable interest rates and accessibility to the institutions' offices, while other farmers stated that they did not want to borrow because of their inability to repay and their lack of financial knowledge. Apart from banks and microfinance institutions, farmers also borrowed from relatives, money lenders, and bought fertilizers on credit as well. What drive them to these sources were the close location and convenience.

To access funding from the above sources, most farmers had to pay the interest charge of higher than 22% per annum, while others paid between 18% and 22% per annum. Most loans were in the range of 4 million Riels (US\$1,000) to 20 million Riels (US\$5,000) and below 2 million Riels (US\$500), the amount which farmers expressed that was meeting their demand. Although most of the time their loan application is approved, these farmers still encountered some challenges, including the requirement for collaterals, interest rates, and guarantor. Usually, there was funding need during pre-ploughing period when farmers need capital to buy inputs for their farming.

3.2 Performance of Rice Millers

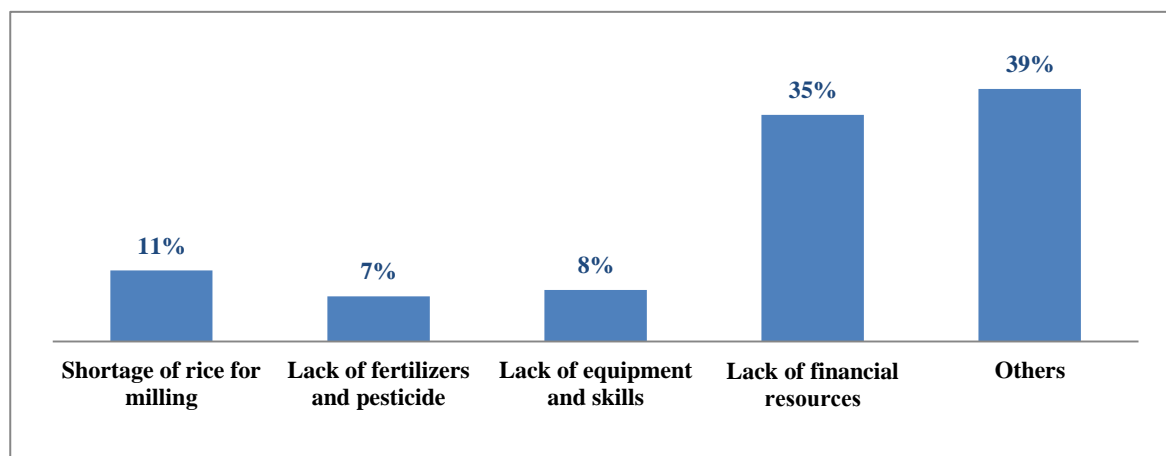
Rice millers play an important role in the processing and exporting of rice in Cambodia by functioning as middlemen between farmers and exporters, such as buying paddy from farmers. Most of rice millers had been in operation over 10 years, and only some rice millers had just started operation. With respect to production capacity, 62% of rice mills could mill between 1,000 tons and 10,000 tons of paddies, and 9% could mill over 20,000 tons of paddies per year. Amid this yield, 13% of rice millers expressed their satisfaction whereas 77% indicated that the output did not meet their expected capacity due to shortage of financial resources (35%), insufficient paddy for milling (11%), lack of equipment and skills (8%), insufficient fertilizers and pesticides (7%), and other factors (39%) which include insufficient labor, no markets, high electricity cost, and paddy being sold to neighboring countries.

Figure 7: Length of Rice Mill Operation and Production Size



Source: Research data

Figure 8: Challenges for Rice Mills



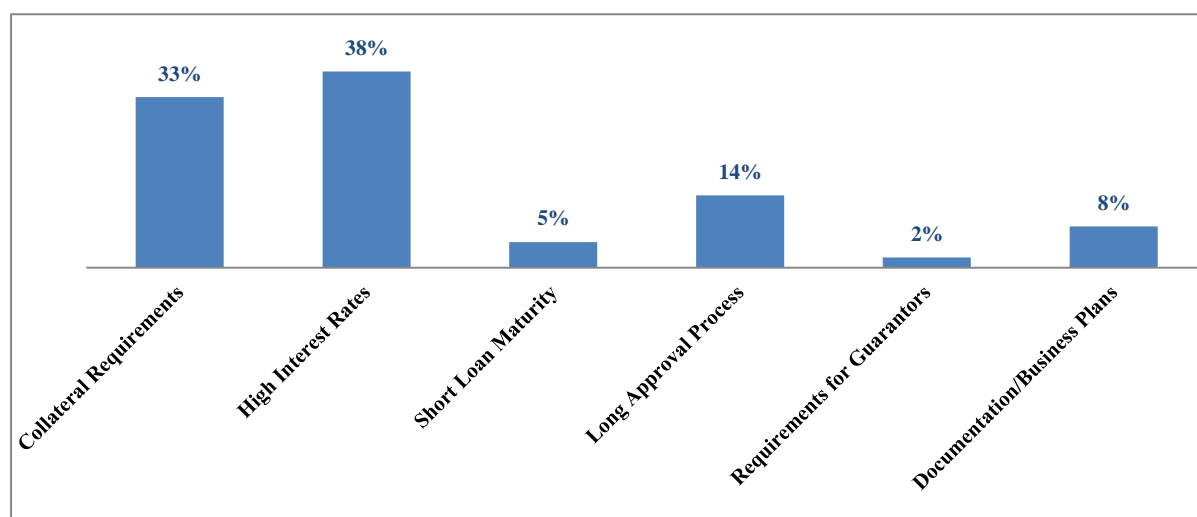
Source: Research data

For buying paddy, rice millers cannot rely solely on paddy sources available in their own provinces, i.e., they have to buy also from either farmers or rice traders in other provinces. Rice millers who encountered funding shortage indicated that apart from their own savings and borrowing from relatives, they also wanted to borrow from banks and financial institutions, especially banks, because the borrowing procedure could be easy and the interest rate of between 8% and 10% per annum, which was lower than that of microfinance institutions. However, some rice millers did not show intent to borrow from banks and financial institutions due to inability to repay.

For those millers who obtained loans from banks and microfinance institutions, more than half of them received between US\$100,000 and US\$1,000,000 worth of credit, and about 22.5% received over US\$1,000,000, with most of the loan applications were approved. Despite the funding received, 83% of rice millers expressed that the loan was not sufficient for buying paddy and for expanding their businesses. Besides, the main challenges for rice millers in accessing banks and financial institutions loans were collateral requirements and interest rates.

It should be noted that recently some rice mills were closed, which had been contributed by improper use of financial resources, such as investment in expanding a business larger than demands, resulting in high cost with revenue lower than expenditure. However, despite the financing issue, the decline in farmers’ paddy production was a factor making it difficult to find enough input for milling, while these millers also had to bear a high cost for production, storage, and transportation of paddy.

Figure 9: Challenges for Accessing Loans from Banks and Microfinance Institutions



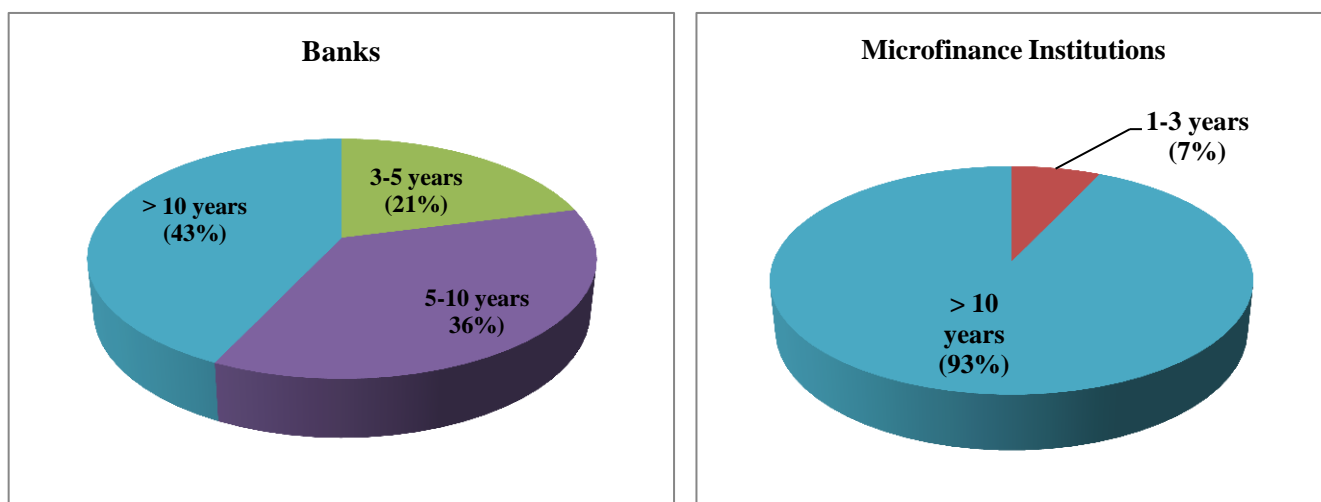
Source: Research data

3.3 Credit Provision by Banks and Microfinance Institutions

The banking system in Cambodia has gradually evolved in line with market development and alongside the growth of economy. As at the end of 2015, the banking system in Cambodia consisted of 36 commercial banks, 11 specialized banks, 8 microfinance deposit-taking institutions, and 50 microfinance institutions. Banks and microfinance institutions operating in Cambodia have provided loans to all sectors, of which agriculture has always received a substantial share compared to other sectors, and which include rice cultivation, fishery, and crop cultivation. According to a 2015 report by the National Bank of Cambodia, banks and microfinance institutions provided a total credit of US\$14.7 billion, of which 15.5% was given to agriculture (US\$1.2 billion by banks, and US\$1.1 billion by microfinance institutions). Institutions that are heavily engaged in agriculture financing include ACLEDA Bank, Canadia Bank, SHB Bank, PRASAC Microfinance Institution, AMRET Microfinance Institution, and SATHAPANA Microfinance Institution. ACLEDA Bank was the leader with US\$516 million in while the Rural Development Bank had lent US\$64 million to this sector, respectively.

Among these institutions, about 43% of banks have provided agriculture financing for more than 10 years, and about 36% have done so between 5 to 10 years while most microfinance institutions (93%) have given credit to this sector for more than 10 years. Furthermore, loans by banks and microfinance institutions to agriculture shared approximately 10% and 35% their respective lending portfolios. This shows that microfinance institutions have been heavily engaged in agriculture financing.

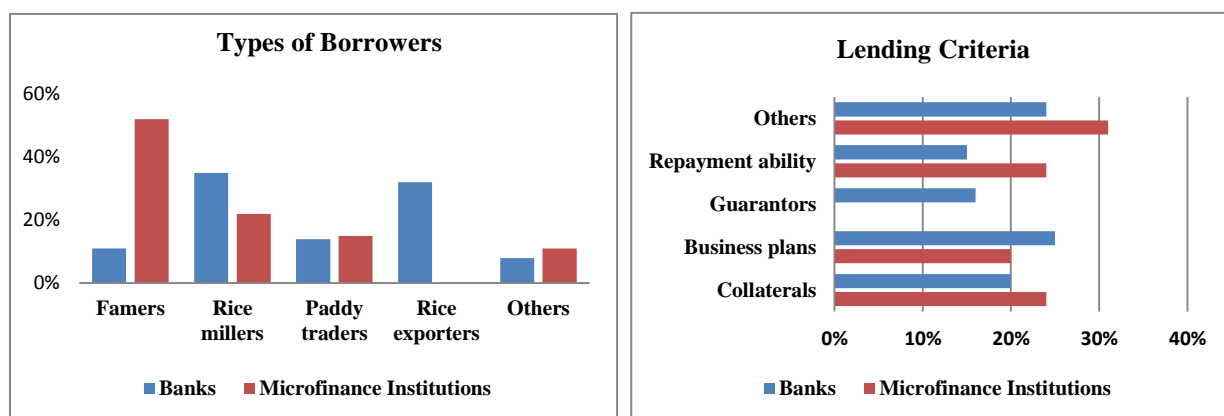
Figure 10: Years Active in Agriculture Lending



Source: Research data

Banks and microfinance institutions have different target customers in agriculture. In this regard, 70% of banks' credit was given to rice millers and exporters while 52% of microfinance institutions' credit was given to farmers and only 22% was given to rice millers. This is because rice millers and exporters often needed larger loan, while most farmers needed smaller one.

Figure 11: Types of Borrowers and Lending Criteria



Source: Research data

While banks and microfinance institutions have given loan to all sectors, agriculture loan is not treated differently from loan to other sectors - both should comply with the same requirements as determined by each institution. Also, borrowers must meet a number of criteria in order to be eligible for the loan; those include collaterals, ability to repay, business plans and guarantors. Of these requirements, banks focus mainly on collaterals and business plans, which can be a challenge for rural people who do not have proper house deeds and land titles and for small firms that cannot prepare proper financial statements and business plans. Microfinance institutions, on the other hand, pay more attention on the ability to repay, collaterals, guarantors while less attention is paid on a business plan. For the credit that banks and microfinance institutions provided, 79% of borrowers had collaterals in the form of land and building, and the other 31% had movable assets as collaterals. Moreover, institutions stated that for those having no collaterals, 20% and 54% of them still received loans from banks and microfinance institutions respectively while 53% and 27% of borrowers having no business plan also received loans respectively from banks and microfinance institutions.

Concerning annual interest rates, loans from banks are charged with lower interest rates than those from microfinance institutions. In general, the minimum interest rates of banks' loans ranged between 6% and 8%, and the maximum interest rates ranged between 9% and 11%, while the minimum rates of microfinance institutions ranged between 18% and 20%, and the maximum rate was higher than 23%. Agriculture loans are charged with the same interest

rates like other sectors, and most of the banks loans had maturity of more than 3 years, while nearly half of microfinance loans had a maturity of more than 3 years. Banks' loan size was often large, starting from US\$500,000 to above US\$10,000,000 while microfinance loans were below US\$500,000. Specifically, 31% of banks' loans were larger than US\$10,000,000, and 62% were between US\$1,000,000 to US\$10,000,000. Most microfinance loans were between US\$5,000 to US\$100,000, 6% were larger than US\$100,000, and 20% were below US\$5,000.

With respect to repayment, two methods were preferred by borrowers, which are installment payment and balloon payment. There is difference in repayment by borrowers of banks and microfinance institutions as the majority of banks' borrowers preferred to pay installment whereas microfinance borrowers preferred the balloon payment. There were some borrowers who preferred seasonal repayment. Non-performing loans for agriculture recorded low with the default rate of 70% of these institutions were less than 0.5%; the institutions also indicated that if agriculture, especially the rice sector, keep on growing, they would want to expand more loan to this sector.

IV. Conclusion and Suggestions for Agriculture Financing

With the development of the agriculture sector as well as the Royal Government's focus on agriculture, this sector has developed over time, reflected by the increase in rice export. However, despite the growth in export, this study shows that the rice sector encounters a number of issues, including the fact that farmers were unable to achieve yields as expected due to too much reliance on weather, and the other fact that farmers and rice millers both faced the challenge of no markets, and high cost of production. Although 35% of millers emphasized the lack of financial resources is a key challenge, only a small number of farmers faced this issue. The difficulties in accessing financing from banks and microfinance institutions were due to lack of collaterals and high interest rates. It should be noted that understanding of real needs and use of financial resources is very important to ensure success for a business, and targeted and proper use of financial resources is even more important to prevent serious losses for a business. In providing financing, banks and microfinance institutions focused greatly on agriculture financing, in which about 15.5% of institutions' total credit was given to agriculture.

Based on the research findings, in order to increase agriculture financing, banks and microfinance institutions may consider the following measures:

- In terms of lending, institutions shall take into account the repayment capacity rather than collaterals, such as use of credit data of the Credit Bureau to analyze and assess borrowers' creditworthiness, which would allow customers who do not have

collaterals to have access to financing to improve their livelihoods as well as to enhance the institutions' opportunities to expand their market share;

- Accepting only real estates (houses, land, buildings, etc.) as collaterals has prevented customers who do not have immovable assets, but have only movable assets, from access to credit. Institutions should consider other movable assets besides immovable assets, such as:
 - Inventory financing, which is a form of providing short-term credits or loans by accepting inventories as collaterals for loans in case that borrowers are unable to repay;
 - Warehouse receipt financing, which is a form of inventory financing with customers using receipts confirming goods they have in their warehouses as collaterals to assure their loans, and these warehouses can be public and recognized by lenders or ones located in the borrowers' sites and managed by a third, independent party.
- Enhancement of farmers', farmers' associations' and rice millers' understanding of financial products and services as well as proper use of financial resources to promote effective and targeted use of financial resources;
- Basic training for farmers, farmers' associations and rice millers in preparing business plan; recording and preparing financial statements in order to enhance lenders' confidence;
- Banks and microfinance institutions' efforts to better understand the paddy/rice process and products to strengthen the quality of loan to the sector;
- Increasing loans in Riels, which can facilitate farmers' purchase of agricultural equipment and inputs since most of these transactions are settled in Riels.

At the same time, engagement by other relevant institutions and stakeholders can also increase farmers' access to financing from banks and microfinance, such as:

- Improvement in infrastructure, such as irrigation and roads to facilitate cultivation and transportation, which plays an important role in increasing yields and reducing production cost;
- Guarantee of markets and acceptable prices for rice produce by farmers as well as expansion of rice export markets;
- Ownership titles for farmers by registering land for people in the rural areas, which would enable farmers to use these as collaterals to borrow from banks and financial institutions.

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