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CREDIT ACCESS AND UTILIZATION IN AGRICULTURE AND AQUACULTURE IN THE AYARWADY DELTA

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INTRODUCTION

Myanmar has one of the least developed financial systems in the world and poor access to credit is widely believed to be a major constraint to investment and productivity improvements in agriculture. This brief presents analysis of data from the Myanmar Aquaculture-Agriculture Survey (MAAS) on access to and use of credit in agriculture and aquaculture. MAAS was implemented in May 2016, with 1100 households in two "clusters" of village tracts in Ayeyarwaddy and Yangon regions, selected for their high respective concentrations fish farms and paddy farms. Our analysis describes the access to, and conditions and utilization of formal agricultural loans from the Myanmar Agricultural Development Bank (MADB), loans from other sources utilized in agriculture and aquaculture, and community-level data on access to credit used for general purposes.

MADB LOANS

MADB is the main source of credit available to agricultural households, three quarters (75%) of which had taken out at least one loan from MADB during the last two growing seasons (dry season and monsoon). In the agriculture cluster, 81% of households engaged in agriculture took out monsoon loans and 62% took out dry season loans. In the aquaculture cluster, a greater proportion of agricultural households took out dry season loans (61%) than monsoon loans (21%), reflecting the fact that many farms in the cluster are low-lying and flood during monsoon, making paddy cultivation problematic.

In the agriculture cluster, the main reason for taking out monsoon loans was to purchase chemical inputs for monsoon rice cultivation (60%). Purchase of chemical inputs was likewise the primary reason for taking out loans in dry season (43%). In the aquaculture cluster, purchasing seed for rice was the main purpose of both monsoon and dry season loans (34% and 36% of loans respectively).

On average, the duration of MADB loans taken in the monsoon was longer (8 months) than in dry season (6 months). While most monsoon loans were taken in July and repaid in March, the majority of dry season loans were taken in December and repaid in June. On average, monsoon loans were disbursed at the rate of MMK 120,000 per acre and dry season loans at MMK 76,000 per acre. The average loan size in the monsoon was MMK 650,000, and the average loan size in the dry season was MMK 400,000. The mean annual interest rate for all MADB loans during the last two growing seasons was 8%.

It is widely believed that inflexible repayment schedules for MADB loans cause farmers to sell their product immediately after harvest when prices are lowest. This perception is only partially confirmed by our data. Among farmers who took loans in monsoon

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season, more than a quarter (26%) reported having to sell their crop earlier than they desired in order to repay their debt. This percentage rises to 32% for dry season loans.

Agricultural Loans from Other Sources

Within the past 12 months, 30% of agricultural households had taken out loans for use in agriculture from sources other than MADB. The two most important loan providers were relatives or friends (38% of non-MADB loans) and private moneylenders (29%). In the agriculture cluster, the most common purpose for taking agricultural credit from these sources was to pay for 'other agricultural expenses' (29% of loans), whereas purchasing seed for dry season rice was the most common purpose in the aquaculture cluster (25%).

The size of agricultural loans from relatives/friends and private moneylenders were the highest among all sources, with a combined average value of MMK 1.2 million. Loans from these sources also commanded some of the highest average annual interest rates among all non-MADB sources: 89% for private moneylenders (highest) and 75% for relatives or friends (third highest). No loans from these sources were secured with collateral.

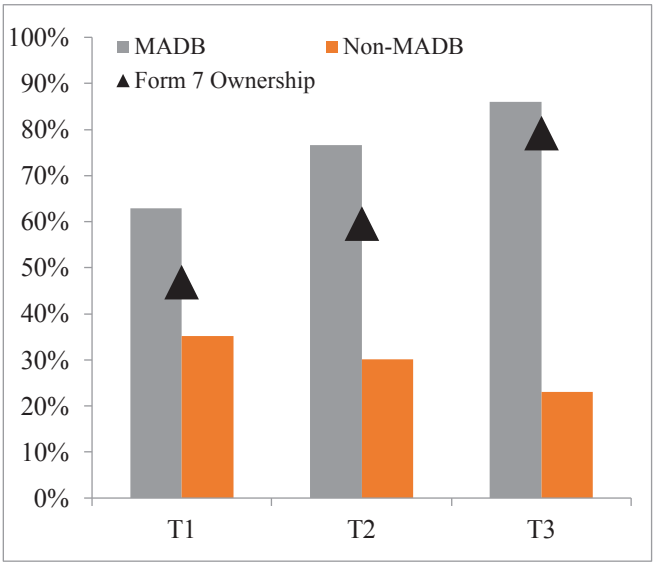
Only 9.5% of loans were output-tied (committing the borrower to sell the harvested crop to the lender). Output-tied agricultural loans, when offered, came chiefly from moneylenders (31%) and relatives/friends (52%). Not a single output tied loan for agriculture was obtained from an agricultural trader or input supplier.

Determinants of Agricultural Loan Access

Poorer farming households had worse access to MADB loans than the economically better off. Using expenditure as a proxy for income, households were divided into five groups of equal size (quintiles) based on per capita expenditure, with households in quintile 1 representing the poorest 20% of the population, and those in quintile 5 households the wealthiest. Whereas almost 80% of households in expenditure quintiles 2-5 had received an MADB loan within the previous two cropping seasons, only 58% of households in the poorest quintile had done so. Conversely, 46% of households in quintile 1 took non-MADB loans during this period; the highest rate among all five quintiles.

Analysis of the relationship between agricultural landholdings and credit access yielded similar results (Figure 1). Households were categorized into three groups of equal size, where tercile 1 contained the third of all households owning the least agricultural land and tercile 3 contained the third holding the most. Households with more land had better access to formal credit, while the land-poor depend primarily on informal sources. Moving from landholding tercile 1 to tercile 3, the share of households taking MADB loans increases from 63% to 86%, while the share of households taking loans from non-MADB sources falls from 35% to 23%.

Figure 1. Credit Access, Landholding, and Tenure Security



Source for all figures: Authors, MAAS 2016.

Why might households with larger landholdings have better access to formal loans? Borrowers wishing to obtain MADB crop loans must demonstrate their eligibility by presenting an agricultural land use title

certificate (Form 7). The share of households in landholding tercile 1 owning at least one agricultural parcel secured by Form 7 is 47%. This rises to 60% and 80% for households in terciles 2 and 3 respectively. This suggests that the land-poor also tend to have poorer tenure security, likely also constraining their access to low interest MADB loans.

Aquaculture Loans

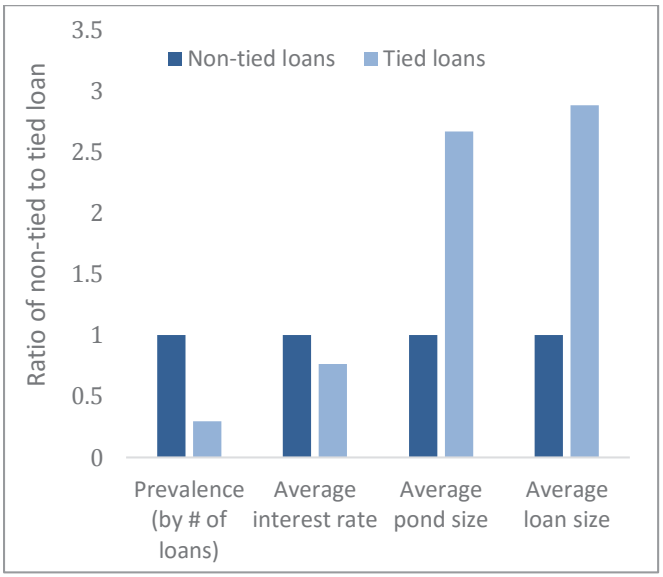
Forty one percent of households engaged in fish farming had taken credit for use in aquaculture within the past 12 months. Among them, households engaged in intensive aquaculture, defined here as those using pelleted feeds, had the highest rate of credit access at 60%, with an average loan size of MMK 7.2 million.

Credit for aquaculture was accessed by a similar proportion of growout farms (44%) and nurseries (37%). The three most important sources of credit for aquaculture were relatives and friends (44%), private moneylenders (28%), and fish traders (13%). However, loans from relatives and friends and fish traders accounted for roughly equal shares of total loan value (35% and 33%), with those from private moneylenders making up 16%. The majority of aquaculture loans (68%) were taken to purchase fish feed (which accounts for the majority of variable costs in aquaculture), with 18% taken to purchase fish seed (the second largest variable cost item).

The average aquaculture loan size was MMK 19.1 million; 21 times greater than the average non-MADB agricultural loan size. This reflects both the capital-intensive nature of aquaculture relative to agriculture, and large average size of fish farms. The average duration of aquaculture loans was 7.4 months, with a mean annual interest rate of 76%. This figure falls sharply to 28% for loans secured by collateral, but these accounted for only 9% of the total.

Loans that commit the borrower to sell output to the lender were more prevalent in aquaculture than in agriculture, accounting for 23% all loans taken. These loans had an average annual interest rate of 63%, which is below the average rate for aquaculture loans. The average loan size of tied loans was more than three times that of non-tied loans (MMK 158 million, versus MMK 55 million). The average area of ponds operated by aquaculture households taking at least one output-tied loan was 40 acres, as compared to an average of 15 acres for households that did not take this type of loan. These are features are summarized in Figure 2, which illustrates the ratios of various characteristics of non-tied and tied loans.

Figure 2. Relative Characteristics of Non-tied and Tied Aquaculture Loans

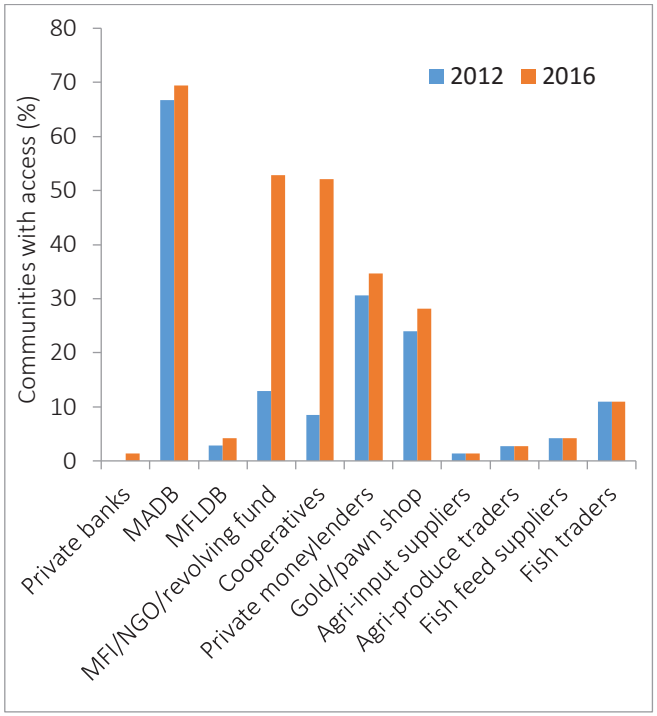


Credit Access within Communities

MAAS collected community-level data based on group interviews with leaders in each of the communities surveyed. This included information on access to credit within the community at the time of the survey (May 2016) and five years previously (2011). The most striking change apparent over this period was in the composition of sources of credit available. In 2011, inhabitants of only 13% of communities were able to access to credit from semi-formal sources (microfinance institutions, non-governmental organizations, and revolving funds), and just 8% were able to access credit from cooperatives. These shares increased dramatically in 2016, to 53% and 52% respectively (Figure 3). There was little improvement in rates of access to credit from other sources during this period however.

Improved access to credit appears to have driven a decrease in average annual interest rates for informal and semi-formal loans (i.e., loans from all sources other than the MADB, Myanmar Livestock and Fisheries Development Bank, and private banks). Taken together, average rates of interest paid on loans from these sources fell from 72% in 2011 to 60% in 2016.

Figure 3. Changes in Access to Credit in Surveyed Communities by Source of Loan, 2011–2016



CONCLUSIONS

The following conclusions can be drawn from this analysis: First, MADB is by far the most important source of loans for agriculture, and plays a crucial role in ensuring that most farmers have access to credit at affordable rates. Terms of repayment for MADB loans appear somewhat more flexible than is generally understood, particularly for monsoon loans, which have repayment periods that are two months longer on average than those for loans taken in dry season. (Repayment schedules for dry season loans are presumably more tightly restricted due to the Bank's need to disperse the main tranche of monsoon loans from July onwards). Perhaps because a degree of flexibility exists, the share of farmers reporting the need to sell crops earlier than they preferred in order to meet MADB loan repayments was lower than expected.

Second, informal lenders (predominantly relatives/friends and moneylenders) are by far the most common sources of informal credit for agriculture, but are also among the most expensive. The least creditworthy agricultural households (those with the smallest landholdings and lowest per capita expenditures) are most heavily dependent on these sources, and thus face a double burden of limited resources and expensive debt. Loans from these two sources also dominate credit utilized for aquaculture. However, despite average operating costs much higher than those in agriculture, only 41% of households practicing aquaculture had accessed a loan for this purpose within the past 12 months, suggesting that the cost of informal credit may act as a disincentive to investment in the activity, likely resulting in sub-optimal productivity.

Third, the prevalence of output-tied loans in agriculture is insignificant, with no loans of this type being provided by traders or input suppliers. In the case of aquaculture, such loans are available from fish traders, but only to large farms. Rather than being exploitative, as such arrangements are often perceived to be, these loans are advantageous to borrowers, because average loan sizes and loan durations are greater than for those from other informal sources, and average rates of interest are lower.

Fourth, access to loans from microfinance institutions and cooperatives improved sharply between 2011 and 2016. The greater availability credit from these providers appears to be linked to a 12-percentage point reduction in the average rate of interest paid on loans taken from sources other than banks over this period. Although this is a very positive development, loans from these sources represent only a small share of those invested agriculture and aquaculture, suggesting potential to tailor them more effectively to meet the needs of farm households.

All research highlights are available for download at http://foodsecuritypolicy.msu.edu/countries/burma/research_highlights

A summary of the survey methodology is available in Research Highlights 1: http://foodsecuritypolicy.msu.edu/countries/burma/research_highlights

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