

Lending Services of Local Financial Institutions in Semi-Urban and Rural Thailand

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This report summarizes the lending services at local-level financial institutions in four changwats (subregions) of Thailand – the semi-urban changwats of Chachoengsao and Lopburi in the Central region and the more rural Sisaket and Buriram in the poorer Northeast region. The data used for this purpose are the result of an institutional survey administered in May 1997 (before the financial crisis hit). The 161 institutions surveyed consisted of rice banks, production credit groups (PCGs) and other financial institutions in the villages and/or tambons of these areas. This report summarizes only the section of that survey that pertains to lending services offered.

The aims of this report are to describe the extent and characteristics of the lending services offered to members or customers of these financial institutions. Section I describes the types of loans offered and the institutions' policies regarding lending. Section II focuses on the institutions' history with lending (the number of loans, average loan size, total amount of credit, and interest rates) and the reasons for changes over time. Where applicable, we attempt to compare the results from this institutional survey with those of the household survey. Both surveys are components of a larger survey project entitled Growth, Inequality and Organizational Design in Thailand.

I. Lending: Types of Services and Policies

Of the 161 institutions interviewed, 129 (80.1 percent) had experience providing lending services to their members. Most of these institutions currently offered loans, while some had made loans at earlier times. Table 1 displays the fraction of these institutions that gave loans in various forms. While the predominant form of credit is clearly cash and rice is also fairly common, a notable fraction of institutions also lent fertilizer and livestock. A comparison between the current distribution and the distribution when loans were first offered shows a movement toward cash and away from other forms such as rice, other crops, fertilizers and animals. The fact that both distributions sum to over 100 percent indicates that at least some institutions give credit in multiple forms.

The institutional policies to evaluate applicants tended to be fairly mixed. Just under half of the institutions had loan application forms, while 62.8 percent of the institutions interviewed applicants before making loans. As in the case with membership

(see Kaboski and Townsend, 1999 (1)), a common reason for not interviewing applicants was that the applicants were already known.

Institutions used a variety of criteria to evaluate loan applicants. These criteria and the fraction of institutions that utilized them are shown in Table 2. All of the suggested criteria in the survey question were used by a significant fraction of the institutions. This indicates that many institutions used multiple criteria to judge their applicants. The most commonly used criteria is the applicant's ability to repay the loan, which over two-thirds of the institutions considered. The next two most commonly used criteria were the loan purpose and other outstanding liabilities of the applicant, each of which were used by over half the institutions. Occupation, while still being used currently by 26.0 percent of institutions, was the only criterion to be used less on average currently than when loans were first offered.

While Table 2 focused on the criteria used to evaluate whether an applicant would receive a loan, Table 3 summarizes the institutions' criteria for determining the *amount* of the loan. These criteria were mentioned from open-ended questions without prompted suggestions. Thus, the answers are slightly more varied and the percentages are lower. The most common determinant of loan size was applicants' need or the purpose of the loan, which about one-third of the institutions mentioned. Other common criteria were the applicant's ability to repay (22 percent), amount of savings with the institution (18.2 percent), and his or her loan history and reputation (15.9 percent). In contrast, collateral, cosigners and the amount of land an applicant owned were not common criteria. Finally, the fact that 6.8 percent of institutions cited their own resources as a key determinant of loan size, while 9.1 percent indicated that funds were lent equally to members suggests that the institutions themselves may be credit constrained.

While most of the analysis summarizes the distribution and policies of the institutions, Tables 4 through 8 and the following discussion summarizes data based on individual types of loan accounts. For example, short-term emergency loans and annual agricultural loans might be two separate observations even if they are given by the same institution. A total of 141 such observations exist, with no single institution offering more than two types of loans.

Table 4 presents the loan sizes and average collateral/loan ratio distributions over these loan-type observations. The size of loans varies both within a given loan type and between different types, as Table 9 expresses. While "average" ("minimum" and "maximum") in the left-hand column refers to the average *loan size* (smallest and largest, respectively) for any given account type, the "mean" ("highest" and "lowest") refers to the mean (highest and lowest) amount *over all 141 loan-type observations*. For example, the observation with the highest average loan amount reported an average loan of 62,000 baht, while the average (over accounts) of the maximum loan reported was 11,007 baht.

The average loan size for the average loan-type observation in 1996 was 5936 baht (or about \$237). Since the mean loan sizes are all larger than the 60th percentile of observations, it is clear that the distribution of observations is skewed to the right. Most

loan-types are for relatively small loans on average, but a few average much larger loans. The average maximum loan is 11,007 baht (about \$440), which is almost twice the average loan size. The minimum loan size is much closer to the average at 4044 baht (about \$162), but one institution did not have a minimum loan size.¹

Finally, the average collateral/loan ratios for the 14 observations (9.9 percent) that required collateral are displayed in Table 4. The collateral/loan ratio was just 1.26 and 80 percent of those observations had required collateral/loan ratios under two. These figures are much smaller than those reported by borrowers in the household survey. Although in that survey the average for rice bank loans was just one, those for production credit groups, village funds, and agricultural cooperatives were eight, fourteen and thirteen respectively (Kaboski and Townsend, 1998). This could indicate that borrower's misperceive institution's collateral requirements. Of course, such hypotheses are tempered by the small sample size.

The distribution of policies for determining the required collateral is shown in Table 5. The most common policies were a fixed collateral/loan ratio (28.6 percent), a fixed collateral/savings ratio (28.6 percent), or a committee evaluation sets the level (21.4 percent).

Although collateral was used relatively infrequently, required guarantors were much more common. For 61 percent of the loan types, guarantors were required. The number of required cosigners averaged 2.1, with at least 90 percent of the loan types requiring one, two or three cosigners. Additionally, almost all of the loans (95.2 percent) require the guarantors to be members of the institution.

As Table 6 displays, the typical loan is an annual loan. The average loan duration is 12.8 months and the middle 40 percent of all observations (40th to 80th percentiles) had a typical loan of exactly 12 months. Still, some variation among institutions and loan types exist. At least 20 percent of the loan types had typical durations of five months or less. In addition, one loan type reported that its average loan was five years, while another reported a typical loan length of just one month.

Table 7 examines how the durations are chosen for different loans. Again, these responses were open answers without any prompted suggestions, thus there is a wide range of answers. The most common response was that the length of the loan period was chosen because of crop seasonality (36.3 percent of responses). Obviously, many of these borrowers are farmers whose income tends to be very seasonal. The second most common response is that the lengths are limited so that the money will be recollected and new loans may be given, which was indicated by 13.7 percent of the responses. Again, this is further evidence that the institutions themselves are credit constrained. Also, it highlights the fact that many of the institutions seem to effectively act like ROSCAs.

¹ While the survey asks for the value of the minimum loan, the answers indicate that some institutions reported the smallest loan given, while others reported the minimum allowable loan.

Buffalo breeding, although rare, was one determinant of the loan period. This was the common response for the few buffalo banks that were surveyed. The buffalo are lent out under the agreement that a person will return a buffalo when it has given birth to a calf. Thus, these loans do not have a set duration.

The actual frequency at which borrowers make payments is reported in Table 8. The majority of the responses are split between two answers. Payment is made either all at once at the end of the loan period (50.7 percent) or annually (23.6 percent). Since, a large fraction of the loans are one-year, many of these may in fact be the same answer. The other common response was monthly payments, which 9.3 percent of loans utilized.

Table 9 summarizes the reasons that institutions gave for using their payment schedules. Loan repayment schedules are most often chosen to accommodate income seasonality and the ability of the borrower to repay. This explanation accounted for 37.7 percent of the responses. Other interesting responses were that the frequency was chosen because of its convenience in collecting and that loan repayment was late enough to allow borrowers to fully utilize their loans. Finally, again in support of a hypothesis that some institutions are credit constrained, it is mentioned by several institutions that repayment is designed to ensure that new loans can be given.

This issue is examined further in Table 10, which presents a summary of how institutions respond when the demand for credit exceeds the available funds. Just over half (51.8 percent) of the institutions give priority to the poorest or neediest members, while equal distribution and first come, first serve policies were also common. These three answers closely mirror the institutions' responses to excess savings withdrawal demand (see Kaboski and Townsend, 1999 (2)). Two other responses repeatedly given were that loans are given out randomly or that they are given out to those members who haven't received loans recently. Again, this rotation style of lending behavior is similar to a ROSCA.

Loan monitoring policy among the institutions was also fairly mixed. 61.5 percent of the institutions indicated that they do monitor their loans, but the frequency and style of monitoring was wide ranging. The various frequencies of monitoring range from as often as twice a month to only once and are displayed in Table 11. Monthly monitoring was the most common response (28.4 percent), but annual monitoring at the time of repayment might actually be more common. Along with those designated as annual monitoring, many more annually monitored loans may be included in the combination of monitoring at harvest and monitoring at the end of the loan period (since a large fraction of loans are one-year). The three categories total 32.5 percent in all.

Table 12 shows the methods that are used to monitor loans. Most institutions (56.3 percent) monitor every borrower. Other common methods mentioned included monitoring randomly, monitoring only late or delinquent borrowers, and monitoring only high-risk borrowers.

The final institutional policy that is examined is lending to non-members. Only 13.2 percent of the institutions who lend allowed non-members to borrow from them. While many of these institutions granted non-members the same borrowing rights as members, others placed restrictions on non-member credit like lower credit limits or only giving non-members emergency loans. Need and ability to repay were the most common criteria for evaluating non-member loan applications. Additionally, several institutions noted that non-members must live within the village in order to be approved.

The above analysis of policies should portray a fairly stable picture of the policies of the institutions surveyed. For almost every policy, institutions were asked if they had made changes to their policies since the inception of credit services. The percentages of institutions that had changed the various policies were very small, ranging from 1.4 to 2.1 percent. In addition, only 1.6 percent of institutions reported a change in their target borrowers.

II. History of Lending Services

This section focuses on the experiences of institutions with their lending services over time. The analysis is not by chronological year, but instead by age of the credit services. Thus, the data for loans in their fifth year of existence are grouped together for all institutions regardless of their actual chronological years. The tables also focus on only the first ten years of experience, since the survey showed that relatively few institutions that had offered loans longer than this². Over the course of the ten years presented, however, both the actual sample and the size of the sample change. Many of services were much younger than ten years old so the sample sizes for earlier years are larger. Still, some institutions did not have data ranging back as early, and others had missing data in the middle years that wasn't reported, so the actual institutions in the sample may vary as well. This should be kept in mind when interpreting the tables.³

The summary in Table 13 presents a complex picture of institutions' lending experience over time. The average loan size⁴ fluctuates, but tends to decrease over time falling from 4800 baht in the first year to 1700 baht in the tenth. In apparent contrast, however, the average growth rates⁵ in loan size are generally positive. This can be explained by the fact that the average growth rates are unweighted. Thus, institutions with smaller loans tended to increase their loan sizes (large percentage increase), while those with larger loans tended to decrease their loan sizes (large absolute decreases).

² In the 10th year sample sizes ranged from eight to nineteen. The data for average loan size and average growth rate of loan size had the smallest samples -- eight and nine, respectively.

³ Additionally, data for the year of the survey, 1997, was ignored. Since the survey was given in May this data was for only part of the year. Scaling this data would be difficult because of the cyclical nature of both incomes and expenditures.

⁴ These average loan size numbers are imputed by dividing the total credit by the number of loans given. While smaller than those reported in Table 4, they are close to the median reported. Again, the samples vary slightly and a few of the outliers may be excluded from this calculation because of insufficient data.

⁵ Growth rates presented are the average of the institutional growth rates, not the growth rate of the institutional average. Consequently, the growth rate numbers may appear to be inconsistent with the corresponding level numbers. The averaging method chosen adds relatively more weight to institutions with smaller values than the alternative.

Additionally, it should be noted that the some of the average loan size changes are due to changes in the sample.

The data for number of loans an institution gives in a year shows the opposite situation. The institutions averaged twenty-five loans in their first year and forty-five in their tenth year of lending. Thus, while the average growth rates are generally negative, the average number of loans tend to increase over time. This is explained by using an argument similar to the one above. Groups giving small loans tended to decrease their number of loans (large percentage decreases), while more active lenders increased their number of loans (large absolute increases). Finally, it should be noted that two institutions whose number of loans jumped from three to thirty-nine (1200 percent growth rate) and one to six (500 percent), respectively, drive the huge growth rate in the 8th year.

The numbers for total annual credit show a great deal of fluctuation, but very little trend. The average total credit that institutions lend in a year fluctuates from a high of 105,200 baht (\$4208) in the seventh year to a low in the eighth year of 28,400 baht (\$1136). The growth rates in total credit also tend to fluctuate between positive and negative numbers. Again, the high growth rate in the eighth year is driven by the second outlier above which experienced an 1100 percent growth rate in total credit given.

Average annual interest rates were fairly stable and fluctuated between 14% and 19%. Most of the year to year variation is caused by variation in the samples. The interest rates for an individual institution tended to be constant over time and only about one-fifth (18.5 percent) of the institutions had ever changed their interest rates. When interest rates were changed, they were usually lowered, often at the request of the members. In fact, institutions were over three times as likely to lower their rates than to raise them (77.8 percent of reported changes were decreases).

The rates calculated are within range of those that are calculated from the household survey. In that survey, the average interest rates for rice banks was a 41%, but those of other village funds, production credit groups and agricultural cooperatives were much lower -- 11%, 13%, and 11% respectively (see Kaboski and Townsend, 1998).

While Table 13 is informative, it sheds no light on the variation in the experiences of the individual institutions. That is, are there some institutions whose lending services are consistently growing each year, while others are consistently giving fewer loans, or do institutions tend to have one year with many loans followed by a year with very few? Tables 14 through 16 complement Table 13 by looking at the five-year averages of annual growth rates.

In Table 14, the distribution of growth rates in loan size is displayed. The trend for most institutions was for loan size to increase over time. Over the first five years the mean growth rate was nine percent. Furthermore, at least sixty percent of institutions had growth rates of least three percent. The average growth rate in loan size over the second five-year period is positive, but smaller (one percent). This number is based on an

extremely small sample, however, since only two institutions had the appropriate data for years six through ten.

Table 15 shows further evidence that, although experiences were mixed, on average institutions gave fewer loans out over time. The number of loans tended to decrease by thirteen percent annually over the first five years and seven percent over years six through ten. Although, not shown in the table, at least ten percent of the institutions stopped lending during the first five years. Still, many other institutions expanded the number of loans, with at least forty percent of institutions in each of the two periods having positive growth rates.

Table 16 tells a slightly better story for the change in total credit. Total credit given out by institutions declined at an average rate of six percent annually over the first five years, but actually increased by one percent over the next five years. Nevertheless, positive growth in credit was attained by at least sixty percent of the institutions over the first five years, but by less than forty percent over the next five years. Again, the sample size for years six through ten is extremely small – just four institutions.

The reasons given for both growth and decline in credit are illustrated in Tables 17 and 18, respectively. These tables focus on the reasons given for changes in the number of loans, but the explanations for total credit are nearly identical. Table 17 shows that the reasons for an increase in the number of loans are fairly evenly spread out among four major causes: increases in available funds, bad crops or economic conditions, other shocks that increased the demand for loans, and growth in membership.

The reasons for giving fewer loans shown in Table 18 are generally the opposite of those in Table 17. A good economy or crop yield decreased the demand for loans in 29.6 percent of the cases, while other decreases in loan demand accounted for an additional 16.9 percent. Failure of members to repay lowered the number of loans by both decreasing the available funds (21.1 percent) and also by making members ineligible for loans (8.5 percent). Member ineligibility also occurred in an additional 4.2 percent of the cases because of an increase in member incomes.

III. Conclusions

Just over eighty percent of the institutions in the survey offered credit to their members, but the policies and especially the experiences of institutions varied widely. Cash was the major form of credit given and tended to play an even larger role over time, but other forms of credit, especially rice, still existed. The typical loan was about 5000 baht and lasted a year.

The policies were often very responsive to the needs of the borrowers. There are many different reasons given for the determining the loan size, duration and payment frequencies, but the needs and fluctuating income streams of the borrower played a role in the policies of many institutions. Borrowers are evaluated based on many criteria as well, but the borrowers' needs and ability to repay were common criteria. Guarantors

were used for 61 percent of the institutions. In contrast, collateral was rarely required (9.9 percent) and collateral/loan requirements, when required were almost always less than two. Loan monitoring was common, but the form and frequency of monitoring varied greatly.

The lending experiences of institutions varied greatly. While the average loan size tended to fall and the number of loans and total credit tended to grow, the variance in the experiences of institutions is the dominant characteristic of the data. The interest rates variation among institutions was also fairly large, but individual and average interest rates were quite stable over time.

Bibliography

Kaboski and Townsend, *Founding and Membership of Local Financial Institutions in Semi-Urban and Rural Thailand*, unpublished report, 1999

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1. Percent of Institutions with Lending Services that Offer Various Forms of Loans

	Cash	Rice	Other Crops	Fertilizer	Other Farm Inputs	Animals	Other	Total
Currently	65.1	24.8	1.6	4.8	0.8	2.4	1.0	100.5
When Loans First Offered	61.7	29.4	2.4	5.5	0.8	4.7	1.0	105.3

2. Percent of Institutions Using Various Criteria to Evaluate Applicants

	Amount of Savings with Institution	Purpose of the Loan	Other Outstanding Liabilities	Reputation	Ability to Repay	Occupation	Other Criteria
Currently	28.6	59.3	52.8	32.5	69.1	26.0	13.3
When Loans First Offered	28.0	58.1	52.7	31.8	68.2	28.7	12.9

3. Percent of Institutions Using Various Criteria to Determine Loan Size

	Amount of Savings with Institution	Need/Purpose of the Loan	Collateral/Cosigners	Repayment History/Reputation	Ability to Repay	Amount of Land	Resources of Institution	Fixed Loan Size	Funds Distributed Equally	No Criteria	Other
Percent of Institutions Mentioning	18.2	33.3	2.3	15.9	22.0	3.0	6.8	9.1	9.1	5.3	12.1

4. Loan Sizes and Collateral/Loan Ratio (Amounts in baht)

Over Loan Types => Over Loans V	Mean (Std. Dev.)	Highest	Lowest	20 th percentile	40 th percentile	60 th percentile	80 th percentile
Average Loan	5936 (8170)	62,000	90	864	2000	5000	10,000
Maximum Loan	11,007 (13,809)	70,000	500	1360	3000	10,000	20,000
Minimum Loan	4044 (7403)	62,000	0	500	1000	2500	7000
Average Collateral/Loan Ratio	1.26 (0.63)	2.00	0.33	0.50	1.00	1.25	2.00

5. Policy for Determining Necessary Collateral

	Committee Evaluation	Fixed Ratio of Savings	Fixed Ratio	Other	Total
Percent of Loan Types Requiring Collateral	21.4	28.6	28.6	21.4	100.0

6. Typical Loan Duration (in Months)

	Mean (Std. Dev.)	Highest	Lowest	20 th percentile	40 th percentile	60 th percentile	80 th percentile
Typical Loan Duration	12.8	60	1	5	12	12	12

7. Reasons for and Determinants of Loan Duration

	Crop seasonality	To allow new loans to be given	Outside regulation/advice	Longer loans are harder to collect	Borrower need	Amount of Loan	Buffalo breeding	Group policy	Agreement w/ committee	Borrower ability to repay	Other	Total
Percent of Loan Types Mentioning	36.3	13.7	12.9	4.0	2.4	6.5	3.2	7.3	4.8	2.4	6.5	100.0

8. Frequency At Which Borrowers Make Payments

	All at once	Annually	Twice a year	Quarterly	Monthly	Twice a month	Other	Total
Percent of Loan Types	50.7	23.6	3.6	2.9	9.3	1.4	8.6	100.0

9. Reasons for and Determinants of Payment Frequency

	Total	100.0
	Other	8.2
	Loan type	4.1
	Frequency of dividend distribution	1.6
	To ensure borrower repays gradually	3.3
	Long enough to allow borrower to utilize loan	4.1
	Agreement or decision	9.0
	Group policy	7.4
	Buffalo Breeding	2.5
	Amount of Loan	5.7
	Convenience of collection	4.9
	Outside regulation/advice	7.4
	To allow new loans to be given	4.1
	Ability to pay/income seasonality	37.7
Percent of Loan Types		

10. Loan Priority Policy if Demand Exceeds Available Funds

	Total	100.0
	Other	4.4
	Rotation/those who haven't received loan recently	2.6
	Random/lottery	8.8
	First come, first serve	11.4
	Distributed equally	21.2
	Neediest/poorest	51.8
Percent of Institutions		

11. Loan Monitoring Frequency

	Total	100.0
	Other	2.7
	Only if late or delinquent	6.8
	Initially, to verify proper use of funds	4.1
	Twice a month	1.4
	Monthly	28.4
	Between monthly and twice a year	13.5
	Twice a year	2.7
	Annually	12.2
	At harvest time	5.4
	Halfway point of loan	8.1
	At end of loan duration	14.9
Percent of Institutions		

12. Method for Monitoring Loans

	Every borrower	Random borrowers	Only borrowers who have been late or delinquent	High risk borrowers	Other	Total
Percent of Institutions	56.3	9.9	7.0	14.1	12.7	100.0

13. Average Loan Size, Number of Loans, Total Annual Credit, and Interest Rates over Time

	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year	6 th Year	7 th Year	8 th Year	9 th Year	10 th Year
Avg. Loan Size (in baht)	4800	3100	2600	3300	2300	2000	3100	1300	1700	1700
Avg. % Growth Rate in Average Loan Size	8	29	89	-8	16	31	6	34	-23	91
Avg. Number of Loans	25	25	28	29	33	30	31	26	36	45
Avg. % Growth Rate of Loans	10	-1	-6	11	-2	-2	-7	126	-1	-15
Avg. Total Annual Credit (in thousand of baht)	92.3	44.9	47.5	64.9	67.3	66.0	105.2	25.4	46.3	49.0
Avg. % Growth Rate in Total Annual Credit	13	32	5	-6	7	6	18	222	-30	44
Avg. Interest Rate	16%	14%	15%	16%	17%	16%	19%	18%	19%	19%

14. Five-Year Growth Rates in Loan Size

	Mean (Std. Dev.)	Highest	Lowest	20 th percentile	40 th percentile	60 th percentile	80 th percentile
Annual % Growth (Years 1-5)	9 (15)	28	-12	-6	3	17	36
Annual % Growth (Years 6-10)	1 (11)	9	-7	-7	-7	9	9

15. Five-Year Growth Rates in Number of Loans

	Mean (Std. Dev.)	Highest	Lowest	20 th percentile	40 th percentile	60 th percentile	80 th percentile
Annual % Growth (Years 1-5)	-13 (43)	37	-100	-49	0	5	10
Annual % Growth (Years 6-10)	-7 (16)	4	-34	-29	-4	2	4

16. Five-Year Growth Rates in Amount of Total Annual Credit

	Mean (Std. Dev.)	Highest	Lowest	20 th percentile	40 th percentile	60 th percentile	80 th percentile
Annual % Growth (Years 1-5)	-6 (54)	71	-100	-80	4	8	28
Annual % Growth (Years 6-10)	1 (7)	10	-4	-4	-3	0	10

17. Reasons for Increases in Number of Loans

	More available funds	Bad crops or economic conditions	Other increases in need for loans	Increase in membership	Other	Total
Percent of Increases	22.8	22.8	22.8	21.1	19.3	108.8

18. Reasons for Decreases in Number of Loans

	Less available funds/members didn't repay	Good crops or economic conditions	Other decreases in need for loans	Decrease in membership	Income increased so ineligible for loans	Didn't repay so ineligible for loans	Fewer loans, but larger	Year is only partially completed	Other	Total
Percent of Decreases	21.1	29.6	16.9	5.6	4.2	8.5	5.6	7.0	2.8	101.3