

Effects of Microfinance on Agricultural Occupation

Case Study in Battambang Province

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Abstract. The study aims to explore the effects of micro-credit provided by microfinance institutes in changing the agricultural occupation of local farmers. The hypothesis proposed that an improvement in the standard of living for micro-credit users' is dependent on their occupation. A hundred sample households receiving micro-credit loans from microfinance institutes were selected for the interview from Sangkae, Thmar Koul and Sampov Loun district of Battambang province. Cluster Sampling Method was used to determine the location of the study, while Simple Random Sampling Method was used to select households. The results indicated that agriculture is the main occupation of most households. Most households therefore used micro-credit for buying agricultural equipment. It was found that microfinance contributes to increased income, household consumption and savings for households. Moreover, there was an increase in employment rate and economic activities in the districts. However, households which had not used micro-credit in the proper way have sold their property and land to repay the loans. Despite some negative effects, this study found that microfinance has generally improved agriculture works and the welfare of households.

Keywords: Microfinance; Micro-credit; Agricultural Occupation

1. Introduction

Microfinance is often defined as financial services such as credit services, money transfers and insurance for poor and low-income clients (Plamondon, 2001). Micro-credit can provide a range of benefits that poor households highly value including long-term increases in income and consumption (ADB, 2000).

Many studies have shown that microfinance is an effective tool in socio-economic development (Simanowitz *et al.*, 2000). Microfinance increased households' assets (Kaboski and Townsend, 2002; Shetty, 2006; Irobi, 2008; Chowdhury *et al.*, 1991; Hashemi *et al.*, 1996). Micro-credit helps the poor to smooth cash flows and avoid periods where access to food, clothing, shelter or education is lost. Credit can make it easier to manage shocks such as a wage earner's illness, or natural disasters (Vong, 2009). The poor use credit to build assets such as buying land, which gives them future security. Women participants in micro-credit programs often experience important self-empowerment (ADB, 2007).

In Cambodia, many NGOs such as GRET, ILO, World Vision, USAID, CRS, and AFD were the first MFIs and played an important role in providing microfinance services for poor households in the rural areas in the beginning of the 1990s (Chou *et al.*, 2008). MPFD (2005) reported that the largest financial institute in Cambodia is ACLEDA and there are many other MFIs operating throughout the country such as AMK, KREDIT, Vision Fund etc. Most households need micro-credits during harvest season (Hazarika and Sarangi, 2006). Sisovanna (2002) suggested that only households with large land ownerships were able to receive loans from MFIs, while poor households with no land ownership always received loans from informal money lenders.

As microfinance institutions have increased rapidly in Cambodia's rural areas, many households have used micro-credit for different purposes in daily living especially for agriculture purposes. CGAP (2003) stated that agricultural microfinance remains a thorny challenge. While microfinance loans are often already used for agricultural activities, microfinance products are often a poor fit with agricultural cash flows and as a result can be more risky for lenders and borrowers alike. However, research has not been conducted on the effects of microfinance on agricultural occupation of households who have accessed MFI loans. For this

reason, this study aims to find the effects of microfinance on agricultural occupation and to determine the factors affecting the success and failure of households who have used microfinance.

2. Research Method

The study used quantitative and qualitative research tools. A semi-structured interview and questionnaires were used in data collection, through interviewing 100 households which had used credit services from microfinance institutes in Sengkae, Thmorkol and Samlot district of Battambang province. Additionally, there was an in-depth interview with various groups of stakeholders including 6 commune managers, 12 village managers, 2 credit officers of the National Bank of Cambodia, 2 credit officers of a rural development bank, and 5 representatives of microfinance institutes and NGOs.

This study relies on both primary and secondary data. The primary data provided by households through closed and open-ended questionnaires was a focal point in this study. The questionnaires were examined and coded before they were formally used. Secondary data such as theses, dissertations, journals and research reports were extracted from the internet to be used in comparing the results of similar research in other countries.

The sample size was decided by using the Non-probability Sampling Method; only the households who used micro-credit from microfinance institutes were chosen. In addition, The Cluster Sampling Method was used to determine the location for the study and the Simple Random Sampling method was used to select the households from a list provided by the local authority for interviews.

The collected data was coded and entered into MS Excel and SPSS programs for analysis. The data was divided into two parts: qualitative and quantitative data. Descriptive and inferential statistics such as chi-square test, correlation, graphics and diagrams were used in this study.

3. Results and Discussions

3.1. Demographic Characteristics of Respondents

52% of respondents were women. The average age was 44 years old and most of them were head of the family. The average family consisted of 5 members. Most households had access to secondary school education (34%). The primary source of income for most families was rice farming (88%), plantation farming (7%), and animal raising (5%), with an annual income range of over 2000US\$ (49%). Other income sources were mostly from animal raising (39%). Most households had farm land ownership of 5 hectares to 15 hectares (39%), with a house size range from 20m² to 50m² (69%).

3.2. Utilisation of Micro-credit by Households

According to local authority statistical data of the three districts observed, the lists indicated that more than half of total households in Sangkae and Sampov Loun received micro-credit from microfinance institutes, while almost half of all households in Thmar Koul received micro-credit from MFIs. Figure 1 indicates the percentage of borrowers and non-borrowers among the three districts.

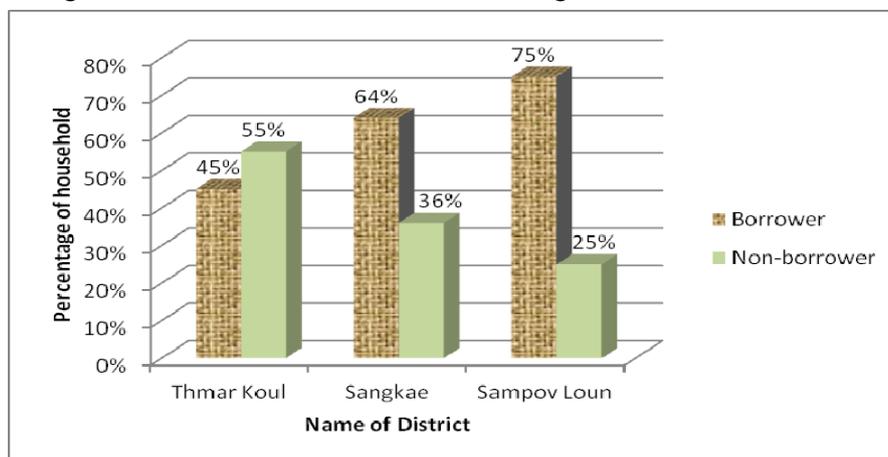


Fig. 1: Borrowers and non-borrowers of Microfinance Institutes (MFIs)

45% of sample borrowers, considered the largest percentage of the sample survey, cumulatively received loans from MFIs ranging from 501-1000 US\$, and another 31% received loans below 500 US\$. However, only 16% of borrowers received loans ranging from 1000-1500 US\$ and 8% got more than 1500US\$ from MFIs. In addition, the data on borrowing purposes revealed that most households borrowed loans from MFIs for farming investments, with only a small percentage of loans found to serve in food expenditure purposes. Table 1 demonstrates loan size and loan purposes of households.

Table 1: Loan size and purposes of using loan

	Categories	Sangkae	Sampov Loun	Thmar Koul
Loan size	≤ 500	31%	33%	34%
	501-1000	46%	47%	37%
	1001-1500	19%	14%	16%
	≥ 1500	4%	6%	13%
Purpose of using loan	Buying farming equipment	14%	15%	17%
	Buying fertilizer	65%	30%	50%
	Buying seeds	8%	27%	11%
	Labour hiring	8%	15%	11%
	Buying land	2%	9%	6%
	Foods expenditure	2%	3%	6%

- The relationship between micro-credit and farm land size

Table 2 is the analysis of correlation between loan size and land size variable. The results demonstrate that the household's loan size was statistically significant when correlated with land size. It can be concluded that farmers with large land holdings need more loans.

Table 2: Correlation of micro-credit need and main job of households

Variables		Loan size
Farm land size	Pearson Correlation	0.420
	P-value (2-tailed)	0.000***
	N	100

Note: *** = significant level at 0.001

- Households Facing Problem with Repaying Loans

The study found that 29% of households experienced an inability to repay their loans to MFIs. Microfinance institutes have penalised such households by seizing their property or land ownership through enforcing contracts between the households and microfinance institutes. In some cases, microfinance institutes have provided assistance to affected households by delaying loan repayments for those unable to repay on time.

3.3. Effects of Microfinance

- Effects of Microfinance on Income

The analysis indicated that micro-credit programs raised income thresholds for households which received microfinance loans. Based on the analysis, the percentage of low income households has decreased, while there was an increase in the number of high income households (Table 3). Additionally, representatives of MFIs reported that most households receiving credit from MFIs had an opportunity use the loan for expanding their farming or business activities; this led to increases in profit and savings of households.

Table 3: Effects of Microfinance on Income

Income	Before accessing loan of MFIs	After accessing loan from MFIs
≤ 1000	35%	12%
1001-1500	25%	22%
1500-2000	7%	17%
≥ 2000	33%	49%

- Effects of Microfinance on Assets

The study was designed to define that microfinance affects the acquisition of household assets. The respondent households were asked questions about the loan to invest in assets. About 3% of households invested the loan in buying land, and about 15% of them borrowed money from MFIs to buy farming equipment such as walking tractors, pumping machines etc. This reflects the mild effect of the micro-credit program on increasing household income. Furthermore, about 20% of households were found to buy TVs, mobile phones, pumping machines etc. by using the income from farming or business. Nevertheless, credit officers reported that a minority of households had sold property and land to repay the loans of MFIs.

- Effects of Microfinance on Farming Activity and Employment

Another important effect of microfinance relates to the enterprises of the respondent households. The survey asked participants about the enterprises and employment in these enterprises. About 70% of the households' enterprise was in rice farming. Obviously, 72% of households used their loans for buying fertiliser and another 15% used loans for purchasing good quality seeds for the next farming season. This indicates the mild effects of microfinance on productivity of rice yield. Moreover, microfinance led to increases in the employment rate of the study area due to the labour hiring in the study area. Evidently, 11% of borrowers borrowed money from MFIs for labour hiring purposes. Some farmers had large land holdings and needed more labour to complete their farming works.

Effects of Microfinance on Food Expenditure

During seasons of drought, some farmers could not farm due to the lack of water. As a result, they could not afford daily food consumption. The study found that microfinance positively affected food expenditure. About 4% of respondent households borrowed money from MFIs to solve problems affecting daily food consumption.

3.4. Factors Affecting Success or Failure of Utilisation of Micro-credit by Households

Table 4 is the analysis of correlation between households unable to repay loans and level of education and land size variable. The results showed that households struggling to repay loans were statistically non-significant correlated with level of education and land size. It can be concluded that the inability to repay loans was not dependent on the level of education and land size factor (Table 4).

There are some other factors such as the loss of the productivity of farming caused by natural disaster, weeds, and pesticide. Moreover, the market factor was also found to be another affecting factor of the inability to repay loans. This is due to the instability of market price of agricultural products set by local middlemen. The market price factor was considered to be the most current interesting issue for farmers in the study area.

According to the observation of credit officers of MFIs, some households which were unable to repay loans had used their loans in inappropriate ways. For example, the MFIs provided loans to households to invest more in their businesses but instead of applying the funds towards these purposes, they were used for gambling, special occasion or healthcare purposes. This eventually caused problems in loan repayment.

Credit officers stated that some households had then tried to borrow from local informal moneylenders to repay the MFIs' loans to avoid property confiscation. Further, some households had borrowed from other MFIs to repay the current loans. Consequently, total loans increased among households, with some households forced to sell all their property or move towns to escape MFIs and moneylenders. It could be concluded that households lacking in cash management skills often faced this problem. Conversely, it was

observed that households which successfully used MFI loans always invested their loans towards the right purposes, as agreed by both the MFIs and borrowers.

Table 4: Correlation between households facing problems in loan repayment and level of education and land size

Variable	N	Pearson Correlation	P-value (2-tailed)
Level of education	100	-0.150	0.137 ^{ns}
Land size	100	0.103	0.308 ^{ns}

Note: ns = Non-significant

3.5. Hypothesis Testing and Discussion

H₀: The improvement in living conditions of micro-credit users is dependent on occupation.

H₁: The improvement in living conditions of micro-credit users is not dependent on occupation.

Table 5 is the analysis of correlation between the annual income before and after receiving loans and the main job of households. The results showed that the annual income before and after receiving loans was statistically non-significant correlated with the main job of households. It can be concluded that the change in living condition of households receiving micro-credit is not dependent on their main job. Therefore, H₀ has been rejected.

Table 5: Correlations between annual income before and after receiving loans from MFIs and main household occupation

		Annual Income (Before receiving loans)	Annual Income (After receiving loans)	Main job
Annual Income (Before receiving loans from MFIs)	Pearson Correlation (r)	1	0.912**	0.094 ^{ns}
	P-value (2-tailed)		0.000	0.353
	N	100	100	100
Annual Income (After receiving loans from MFIs)	Pearson Correlation(r)	0.912**	1	0.011 ^{ns}
	P-value (2-tailed)	0.000		0.911
	N	100	100	100
Main job (rice farming, plantation farming, animal raising)	Pearson Correlation(r)	0.094 ^{ns}	0.011 ^{ns}	1
	P-value (2-tailed)	0.353 ^{ns}	0.911 ^{ns}	
	N	100	100	100

The results found that the incomes and assets have increased slightly and there has been an increase in village employment. This study reflects the analysis of Singh (2004), who found that microfinance increased income and household assets. Similarly, Vong (2009) and Teng (2009) found that microfinance has improved the role of women in the family and encouraged their social and economic activities. Prean (2009) claimed that microfinance improved living standards for many households by increasing income, assets and job opportunities.

The results found that some households had sold housing property and land to repay their loans. The result is similar to the study of Aroca (2000) who has found that microfinance resulted in a negative effect on household income. The study on the microfinance of Village Bank in Thailand revealed that microfinance

did not change the income of households (Colman, 1999 cited in Montgomery and Weiss, 2005) and did not generate profit for household businesses (Tra Pham and Lensink, 2008).

4. Conclusions and Recommendations

The study concludes that microfinance played an important role in changing living conditions of households in Battambang province. Microfinance improved living conditions for many households by increasing income, assets and job opportunities. Moreover, it increased the affordability of medical care. However, microfinance exerted pressure on households and caused some families to lose property and land ownership. In sum, even though microfinance caused some negative effects, it is an effective tool for socio-economic development and poverty alleviation.

It was recommended that the MFIs should clearly ascertain the financial situation of households before providing loans to them. This would avoid the credit risk of both MFIs and borrowers. Any decision to receive loans from MFIs should also be clearly discussed between the heads of households and family members.

In this research, some issues pertaining to microfinance were not covered in detail. Additional studies on the following topics are required: (1) Microfinance and the Empowerment of Women; (2) Does Microfinance Really Assist the Poorest Families? and (3) Are Microfinance Institutes More Effective than Informal Money Lenders?

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