

# Factors Influencing Loan Repayment in Microfinance Institutions in Bhaktapur District, Nepal

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**Abstract**—Group microcredit programs have been found to be an effective tool for Microfinance Institutions (MFIs) to achieve their goals and many of such programs have been successful in countries like Nepal, India, Bangladesh, Sri Lanka, etc. This research attempts to study the impact of different factors on repayment performance based on the responses from 120 borrowers of different MFIs in Bhaktapur district of Nepal. Different independent variables have been taken to study their impact on loan repayment. Various inferential analyses have then been carried out. To further support the findings from quantitative analysis, an unstructured interview was also conducted with three of the loan/field officers actively working in the area. The results show that age of the business, annual profit earned from business, MFI policies and nature of communication of loan officers are found to have motivating impact on loan repayment by borrowers. The results from logistic regression further confirmed that there is a significant impact of annual profit earned by the business and nature of communication of loan officers with the loan repayment. From qualitative analysis it is found that other than peer pressure, the fear of being recognized as a defaulter in the society, nature of group members, support from family members, attitude of the loan officers towards the borrowers and a well implemented microfinance policy are found to have a motivating impact on borrowers to repay.

## 1. INTRODUCTION

With its success in Bangladesh with Grameen Bank, microfinance institutions have been playing a significant role in improving the economic condition of poor people living in the rural areas. This success of microfinance in Bangladesh inspired Nepal as well and with the government initiation micro-finance institutions were established in the country. Since then various microfinance institutions have been providing micro loans to the economically challenged people in the country without them having to keep any collateral for the loan.

It is commonly believed that cases of loan default for micro-credit are rare since microfinance serves a group of borrowers, instead of individual borrowers, and the borrowers feel morally obliged to pay their loan back on time because of the presence of group guarantors.

Timely loan repayment is a major concern for MFIs as they might be facing various problems due to delayed loan repayment. This is also a concern for Nepalese MFIs as borrowers from rural Nepal might also have unpaid loan installments. In order to understand why people default loans, it is important to understand the factors that influence the borrowers to repay the monthly installments on time.

The general objective of this study is to understand the role of various factors that have influence on the loan repayment by the borrower from MFIs. More precisely, the specific objectives of this study are to explore the perception of borrowers towards timely loan repayment and to analyze various characteristics that influence loan repayment. In order to achieve these objectives this research has addressed about the major factors responsible to influence a borrower for timely loan repayment and the relationship between the borrowers' and lenders' characteristics on timely loan repayment. With these objectives fulfilled, this study will give a new insight on the various factors that might influence borrowers to repay.

## 2. REVIEW OF LITERATURE

According to a study conducted by Angaine and Waari<sup>[3]</sup> (2014), various factors relating to clients' characteristic, business characteristics and lender's characteristic had a significant impact on the loan repayment by the borrower. The study found out that respondents supporting many dependents were likely to have delayed loan repayment than those supporting fewer dependents. The study also showed that the education level of the borrowers also played a significant role in the loan repayment. An astounding result as obtained from the research done by Silwal<sup>[12]</sup> (2003) which showed a huge percentage of delinquency in loan officially and unofficially.

A study conducted by Nawai and Shariff<sup>[7]</sup> (2012) in Malaysia showed that age, formal religious education, total income, business formality had a negative coefficient with loan repayment while gender, business experience, distance to the

lender office, number of time visit and loan approval has a positive coefficient. However, the study suggests, a little pressure from the lender may reduce the delinquent and defaults problems.

Okorie<sup>[9]</sup> (1986) shows that the nature, time of disbursement, supervision and profitability of enterprises contributed to the repayment ability and consequently high default rates. Balogun and Alimi<sup>[5]</sup> (1988) also identified the major factors influencing loan repayment as loan shortages, time taken by MFIs for loan delivery, farm size, interest rate, age of farmers, MFIs supervision, profitability/non-profitability of farm enterprises and undue government intervention with the operations of government sponsored credit programs. Moreover, Akinwumi and Ajayi<sup>[2]</sup> (1990) found out that farm size, family size, scale of operation, family living expenses and exposure to sound management techniques were some factors that can influence the repayment capacity of borrowers. Empirical work done by Arene<sup>[4]</sup> (1993), revealed that income, farm size, age of farmers, farming experience and level of education of farmers contributed positively to the credit worthiness of farmers.

The study conducted by Nguta and Huka<sup>[8]</sup> (2013) showed that high cases of default of loan repayment were common (67.9%) in the manufacturing sector. This was followed by the service industry (64.0%) then by the agriculture (58.3%). The trade sector recorded the least (34.9%) cases of loan repayment defaults. Olotomola<sup>[11]</sup> (2002) found out that repayment performance is significantly affected by borrowers' characteristics, lender's characteristics and loan characteristics.

Aside the behavior on the part of borrowers the MFIs are also noticed to have contributed in influencing repayment decisions. The loan products should be carefully designed to suit clients' needs, and also ensure that, the delivery process is convenient (Mensah<sup>[6]</sup>, 2013). The chance that a microfinance institution (MFI) may not receive its money back from borrowers (plus interest) is the most common and often the most serious vulnerability in a microfinance institution (Warue<sup>[13]</sup>, 2012). Okpugie<sup>[10]</sup> (2009) also indicated that high interest charged by the microfinance banks has been discovered to be the reason behind the alarming default.

According to Ahmad<sup>[1]</sup> (1997), causes of loan default include; lack of willingness to pay loans coupled with diversion of funds by borrowers, willful negligence and improper appraisal by credit officers.

### 3. METHODOLOGY

The findings of the research has been carried out by quantitative analysis and based on the primary survey. The sample size selected for the survey is 120 respondents who are the borrowers from MFIs within Bhaktapur district of Nepal with different demographic characteristics such as age, gender, education level and income level.

The descriptive and inferential analysis of quantitative data is conducted and presented in a tabular form using various statistical tools like percentage and frequency distribution, mean, standard deviation, cross tabulation, Chi-square test and so on. Logistic regression analysis has been carried out to identify the relationship between various independent variables and the dependent variable. SPSS software has been used to analyze and interpret data. The reliability of the data has been analyzed by using Cronbach's Alpha technique.

To further support the findings from quantitative analysis and to study deep in the factors affecting loan repayment, qualitative analysis is also done where an unstructured interview was conducted with 3 of the field/loan officers actively working in the microfinance institution.

## 4. CONCEPTUAL FRAMEWORK

The concept model of this study is to analyze the factors influencing loan repayments in MFIs in Bhaktapur district. The data are from a primary source which had been collected via a researcher administered questionnaire. From the conceptualization of the study variables, the conceptual framework is presented in the figure below:

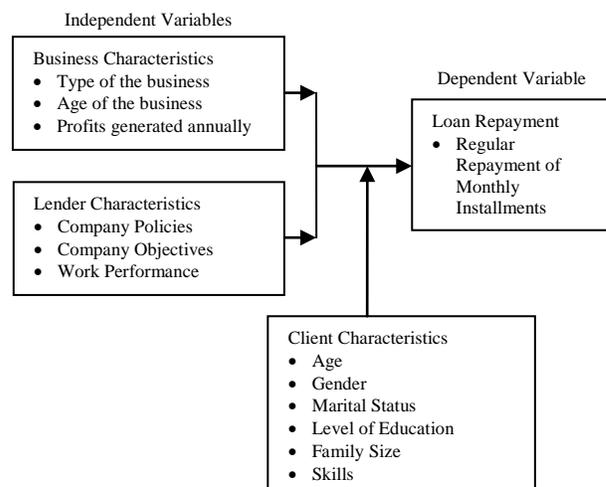


Figure 1: Conceptual framework of the study

## 5. RESULT AND DISCUSSION

### 5.1. Descriptive Analysis

The descriptive analysis shows that maximum number of borrowers belonged to the age group of 36-45 years with 52.5% of borrowers belonging to this group. Most of the borrowers have only acquired school level education, with few of them even being uneducated. 29.2% of borrowers were ran an agro-based business, 34.2% of them ran service based business while 36.7% were running a microenterprise based business. Almost 75% of the borrowers had not taken any official training before starting their business. Furthermore, 40.8 % of borrowers have been running their business for less

than 5 years, 31.7% of them have been running their business for 6-9 years and 27.5% have been running their business for more than 9 years. 18.3% of these businesses earned an annual profit of less than 50,000 rupees and other 23.3%, 32.5%, 20.0% and 5.8% earned an annual profit of (50,000-150,000), (150,000-250,000), (250,000-350,000) and more than 350,000 respectively.

## 5.2. Inferential Analysis

The results from inferential analysis show that there is a significant impact of microfinance policies in the loan repayment behavior of the borrowers. It is also observed that there is a significant relationship between the nature of communication by the loan officer with the loan repayment. Similarly, it is observed that the borrowers agree with the statements that say the loan sanction does not take much time and the authorities constantly remind them about the repayment of loan. However, they quite do not agree with the statements that say the authorities have regular inspection of their business premises/residence and they have proper monitoring and follow-up sessions. This shows that the respondents are not highly satisfied with the work performance of the microfinance institution.

**Table 1: Results from Inferential Analysis**

	Mean	Std. Dev.	t-value	p-value
Microfinance Policy	4.2533	0.37728	-2.153	0.033
Nature of Communication by MFI	4.185	0.61476	-4.335	0.000
Work Performance	3.2383	0.47548	-1.964	0.052

## 5.3. Logistic Regression

Tables 2 and 3 summarize the model that is obtained from logistic regression. The overall predictive capacity of the model is 90.8%, i.e. this model will support the statement that claims that there is regular repayment of the loan by the borrowers, 90% of the time. The value of Nagelkerke  $R^2$  is obtained as 0.621 which means that 62.1% of variation in the dependent variable is described by the independent variables.

The B-value shows the correlation between the given independent variable with the loan repayment. The results from logistic regression have shown that there is a significant relationship between the annual profit from the business and nature of communication of the loan officer with the regular loan repayment by the borrower. The relationship between these two variables is found to be significant with the influence of other independent variables as well.

The overall impact of age of business with the loan repayment by the borrower is significant. However, businesses that have been running for 6-9 years have shown significant impact on loan repayment as compared with the businesses that have

been running for more than 9 years. The overall impact of annual profit on loan repayment is found to be significant.

The expected B-value gives the odds ratio that gives the relative measure of effect of the independent variable with the loan repayment. For e.g.: there is almost 29 times greater likelihood of loan repayment given that other independent variables are controlled. The odds ratio for each category of profit is zero which signifies that there is no difference on the impact of the different profit categories compared to the reference profit group.

**Table 2: Predictive Capacity of the Logistic Regression Model**

Observed		Predicted		
		Regular Repayment of Loan		Percentage Correct
		No	Yes	
Regular Repayment of Loan	No	13	7	65
	Yes	4	96	96
Overall Percentage				90.8
Cox & Snell R Square		0.369		
Nagelkerke R Square		0.621		

**Table 3: Logistic Regression Analysis for Loan Repayment**

Variables	B	S.E.	Sig.	Exp(B)
<b>Business_Duration</b>			<b>0.185</b>	
<b>Business_Duration (1)</b>	<b>-1.497</b>	<b>1.222</b>	<b>0.221</b>	<b>0.224</b>
<b>Business_Duration (2)</b>	<b>-2.012</b>	<b>1.172</b>	<b>0.086</b>	<b>0.134</b>
<b>Business_Duration (3)</b>	<b>-2.571</b>	<b>1.184</b>	<b>0.030</b>	<b>0.076</b>
<b>Profit</b>			<b>0.021</b>	
<b>Profit(1)</b>	<b>-21.017</b>	<b>6673.17</b>	<b>0.997</b>	<b>0.000</b>
<b>Profit(2)</b>	<b>-18.177</b>	<b>6673.17</b>	<b>0.998</b>	<b>0.000</b>
<b>Profit(3)</b>	<b>-18.228</b>	<b>6673.17</b>	<b>0.998</b>	<b>0.000</b>
<b>MFI_Policy</b>	<b>-1.345</b>	<b>1.714</b>	<b>0.433</b>	<b>0.261</b>
<b>Comm_with_Clients</b>	<b>3.361</b>	<b>1.226</b>	<b>0.006</b>	<b>28.819</b>
<b>Work_Performance</b>	<b>-1.012</b>	<b>1.479</b>	<b>0.494</b>	<b>0.363</b>
<b>Constant</b>	<b>17.597</b>	<b>6673.17</b>	<b>0.998</b>	<b>43897720</b>

The result from logistic regression also shows that there is no significant impact of MFI policies and work performance of the microfinance institutions on the loan repayment by the borrowers. The odds ratio for MFI policy is 0.261 which implies that the borrowers are 0.26 times likely to default on loan repayment (because of negative correlation between MFI policies and loan repayment) given that other independent variables are controlled. Similarly, the work performance of the microfinance institution has 0.36 times greater likelihood of loan non-repayment by the borrowers.

#### 5.4. Qualitative Analysis

In order to support the findings from the quantitative analysis and to further analyze the causes of loan default, an unstructured interview was carried out with three actively working loan/field officers. The various factors that influence the loan repayment by the borrowers from microfinance institutions have been summarized in the following paragraphs.

**Microfinance Policies:** All the microfinance provides loan on a group basis. Initially all the group members are given a Compulsory Group Training (CGT) by the microfinance institutions through which the borrowers are screened and only the members who show potential of regular repayment are given the loan. Further, if one individual member fails to repay the loan then the respective group will compulsorily have to repay the loan on the client's behalf. The compulsory group and personal savings also provide a cushion for the loan non-repayment cases. The regular inspection of business and the KYC updates also allows the MFIs to keep proper track of the borrowers and reduce the amount of loan default by them.

**Fear of Status and Name in the Society:** People mainly living in the rural areas have close kinship with their neighbors and they are afraid of being known as a defaulter as it will tarnish their name in the society/village they are living in. So the borrowers feel compelled to repay the loan and utilize the loan properly. However, this is not the case in urban areas as people are not as closely bound and it is easier for them to move from one location to other and start all over again. This trend has encouraged borrowers from urban areas to divert their loan from their main purpose and not have regular repayments or even default the loan completely.

**Field Staff:** The sincerity of the field staff towards the work also plays an important role in the loan repayment by the borrower. A field staff that conducts the CGT properly, inspects the business premises and screens borrowers properly, there is less chances of late repayment by the borrowers. Sometimes just for the sake of meeting their monthly targets field officers might select incapable borrowers which can lead to the increment in loan default rate. The way the field staffs motivate and communicate with the clients also has a significant impact on the loan repayment behavior. The friendlier and encouraging the field staffs are the lesser is the probability of delayed payment.

**Composition of the Group:** The group of borrowers is formed in such a way that they are closely related with each other and they are ready to take responsibility of other group members. So that in case of late repayment by one member, the other group members will repay the installment of their behalf. However, personal feud between the members also have huge impact on the nature of loan repayment by the members. If the group leader is commanding and encouraging then such minor feuds are solved internally. The leader will also encourage the members to help each other in times of their needs. This kind

of behavior also has a huge impact in the loan repayment behavior of the borrowers.

**Business:** Borrowers repay the loan from the profit earned by the business they have invested in. While some businesses start to make profit as soon as they are operated while some businesses like farming, animal husbandry, etc. take some time before they start to earn profit. Some businesses also fail to make any profit at all. In such cases there are higher chances of loan non-repayment by the borrowers.

**Family members:** The loan repayment by a borrower also depends on the nature of their family members. Usually educated families are more understanding and supportive towards the process of loan repayment and in case of loan default, the family members are ready to pay on behalf of the borrowers. But if the family members are not properly educated, then they neither coordinate with the borrower nor they coordinate with the loan officers that can lead to loan default.

One of the major reasons for increasing loan default in microfinance institutions is the rapidly growing microfinance institutions. As the number is increasing, unhealthy competition among these institutions is also increasing that is leading the MFIs to recklessly give loans to borrowers without properly doing their background check. With the aim of increasing their members many MFIs are also working beyond their allocated work areas. This has resulted in the MFIs losing its touch from its members and the borrowers will find it easier to cheat the loan officers and not repay their loan on time. Borrowers are also finding it easier to take loans from more than three MFIs at once, that too usually for false purposes. This excessive borrowings and diversification of loan ultimately leads the borrower to be unable to repay the loan and flee without paying a single rupee. If the borrowers could not be tracked then the loan remains unpaid increasing the default rate in MFIs.

#### 6. Conclusion

The findings of this study suggest that the lender's characteristics and the business characteristics have a more significant impact on the loan repayment behavior rather than the borrower's characteristics. Hence, if a MFI wants to improve their loan performance then they need to look more into these factors. MFIs in Nepal need to improve their work performance and policies and should not be involved in unhealthy competitions if they want to decrease the rate of loan default. To encourage the borrowers to repay the loan on time, they should design policies in such a way that they are accommodating the borrowers not confusing them. Also the loan officers should find ways to have friendly and motivating communications with the borrowers as the nature of communication plays a very significant role in loan repayment behavior.

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