Original Research Article

Determinants of Microfinance Loan default: An empirical investigation in Sri Lanka

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ABSTRACT

Microfinance aims to promote sustainable economic empowerment and capacity building to people in the developing countries. However, in recent times microfinance has captured the attention of a large audience as a system that is unmonitored, uncontrolled and irresponsible. Local and international literature continuously highlighted that microfinance loan default has implications not only at the micro economic level but also at the macroeconomic level. With this factor in mind this research aims to explore factors influencing microfinance loans in Sri Lanka. Both a deductive and a quantitative approach were employed in this research. A structured questionnaire was distributed among microfinance loan borrowers in the region of the Matugama Divisional Secretariat. The findings of this study confirmed that in microfinance institutes' strategies to control loan defaulting, the borrowers' family and group and macro-economic issues influenced loan defaulting of Sri Lankan microfinance customers. The findings of this study could be used by managers of MF institutes in issues such as managing risk and customer portfolio, access to CRIB, and requesting securities before granting a loan. Microfinance trainers could use these findings to design their training and consultation activities for loan borrowers. This knowledge would help borrowers to manage their loan risk while not facing the poverty trap.

Keywords: Microfinance, Loan default, Sri Lanka, Matugama Divisional Secretariat, Developing country

1. INTRODUCTION

The term "microfinance (MF)" refers to the provision of financial services to low income clients, including the self-employed [1]. Professor Mohammad Yunus started the concept of Gramin Bank with the aim of alleviating poverty through small loans for his country's rural poor [2]. In the last few decades, many developing countries have seen some transformation of their financial system experience with the advent of Microfinance Institutions (MFI). Mungure [3] observed that MFIs were established for the purpose of providing micro loans, savings, business advice and training to Micro and Small Enterprises (MSEs). Particularly MFIs were marked by poverty-related missions to help the poor access loans from financing MSEs [4].

There were 123 million MFI customers worldwide by 2016 with India as the leader in terms of MF in 2016 [5]. The ranking shows a strong impetus in South Asia while Latin America and the Caribbean are also highly active in the field of microfinance. According to Daily fit- [6], there is a credit gap of $2.5 to $3.58 billion between licensed financial institutions and potential customer needs in Sri Lanka. Hence, microfinance institutions must contribute to bridge this gap.

The sustainability of MFIs heavily depends on the ability to collect their loans efficiently and effectively. The repercussions of loan defaults on MFIs include inability to disburse more loans in future, reducing operating profits and undermining liquidity. Despite the growth of microfinance in Sri Lanka, MFIs face default problems which are a serious challenge to sustainability of MFIs. If loan arrears persist, poverty-related problems can increase rather than decrease. Recently, many experiences faced in Sri Lanka confirm and demonstrate the seriousness of this problem in the MF sector. MF has already been banned in the Northern Province by the government due to the ongoing conflicts in poverty reduction. Hence, there is an urgent need to investigate the factors affecting microfinance loan defaults in Sri Lanka. This study aims to identify and analyze the factors influencing MF loan default in Sri Lanka.

As a developing country, Sri Lanka has to face many economic and social problems. MF plays a significant role in poverty alleviation, rural development, gender equality (through women empowerment) and quality education which are considered key goals of sustainable development. Therefore, a study of the microfinance sector and loan default is critical for development as a whole. The current study will serve as a useful reference document for loan policy developers, potential investors, government authorities and other stakeholders in identifying and solving this issue.

2. LITERATURE REVIEW

2.1 Microfinance

Microfinance is a financial transactions service that offers financial assistance to unemployed or low-income individuals or groups deprived of access to financial services. According to Kaoma [7], the main aim of microfinance is to eradicate poverty and empower the women. These two aspects are also recognized as two of the major millennium development goals.

Professor Yunus started his Grameen Banks with the intention of alleviating poverty by providing small loans s to his country's rural destitute [2]. This initial process was begun as an experiment in the outskirts of Chittagong University in the village of Jobra, Bangladesh. Its objective was to grant loans to the rural poor without collateral at full-cost interest repayable in regular installments [8].

Later, the Grameen Banks confirmed that its customers subscribe to a basic list of ways that the poor can improve their living status. In appreciation of this great work, in 2006 the Nobel Peace Prize was awarded to both Professor Yunus and the Grameen Bank for their contribution to developing the concept of microfinance.

Microfinance originated as a self-financing model to provide social benefits to the rural poor. However now it has changed into business models which enable the poor to earn an income while enjoying social benefits.

2.2 Sri Lankan MF Context

As a developing country, Sri Lanka has a long history of a fundamental system of microfinance. "Cheetu" in Sri Lanka has been operating at least from the beginning of early 20th century. MF is still considered as an informal but effective way of capital accumulation and saving. However, it functioned as a basic method of MF for the poor. The microfinance sector in Sri Lanka now covers a wide range of institutions and products and provides a significant mode of financial inclusion and empowerment for the low income and poor sections of society.

In Sri Lanka, MF has a long history and today a large number of institutions provide microfinance services, particularly to the poorest households [9]. These institutions include licensed commercial banks, licensed finance companies, co-operative rural banks, thrift and credit co-operatives societies, Divinaguma banks, other community-based organizations, microfinance companies and non-governmental organizations (NGOs). Some of these intuitions are regulated by different authorities such as the Central Bank of Sri Lanka, Department of Cooperative Development and the Department of Divinaguma Development. There are almost 200 MF organizations operating in the country, out of which only 100 MF organizations are identified as having an established country-wide network.

There are some impostors pretending to be microfinance companies in Sri Lanka engaged in business activities that seem to be MF and charge high interest rates from its customers that would lead poor people to further distress. Most of the time customers blame and complain against these types of illegal microfinance companies adversely affecting their goodwill.

It is argued in the literature that the greater the concern for microfinance institutions (MFIs) aiming for financial sustainability, the lesser the impact on poverty reduction, and hence there is a tradeoff between outreach to the poor and financial sustainability [10]. It has also been argued that the microfinance institutions (MFIs) are more concerned about their financial sustainability rather than reducing poverty. Hence, there is a tradeoff between outreach (ability of MF institutes to reach poor remote people) and its sustainability (ability to cover its operating costs). Therefore, there is a need to regulate and supervise the microfinance institutions in Sri Lanka. Parliament enacted the Microfinance Act No. 6 of 2016 which came into effect on 15th July, 2016. It provides for licensing, supervising and regulating microfinance business known as licensed microfinance companies (LMFCs). Non-governmental microfinance organizations are registered under Act No. 31 of 1980 (VSSO Act) by the Registrar of Voluntary Social Service Organizations (CBSL).

2.3 Loan Defaults

Default refers to a situation where a borrower fails to repay a loan. According to Mensah [11] and Gatimu [12] arrears refer to a late payment, partial payment or a skipped payment. When repayment is delayed, a loan is considered as a delinquent loan which loan turns into default where the chance of recovering the loan becomes minimal. Delinquency shows increased risk of loss and a warning against operational problems so that measuring delinquency becomes very important.

The reasons for MF loan default could differ with borrowers assigning one set of factors and loan officers in the field assigning another set. A study conducted by Addae-Korankye [13] found that factors assigned by borrowers are not the main reasons for loan default. Therefore, loan officers need to be vigilant in order to minimize the risk of loan default. Further, Mungure [3] emphasized that most loan defaults are not only by bad borrowers; MFIs are also known to have contributed to loan default.

High interest rates and delays in loan delivery could significantly increase transaction costs and also adversely affect e repayment performance [14]. Loan shortages, disbursement lag, small farm size, high interest rate, age of farmers and poor supervision have been identified as the major reasons for loan default [15]. According to the study conducted by Sheila [16], inadequate financial analysis is another cause of microfinance loan default.

Kohansal [17] showed that the income of farmers in the Kohansan-Razavi province of Iran has a positive effect on loan repayment while loan interest and the number of installments have a negative effect on loan repayment performance. According to a study conducted by Waweru [18] in Kenya, most of the causes of loan default rests with MFIs and failure to manage self-help groups (SHGs). Management of a business is a vital while poor business practice is another reason for loan default. According to Besley, a positive consequence is that successful group members may have a motivation to repay the loans of group members whose projects have yielded insufficient returns to make repayment worthwhile. The negative effect rises when the entire group defaults, even when some members would have repaid individual loans.

In addition, macro-economic factors also need to be considered. A study done by Waweru [18] illustrates that some of the reasons behind loan default in Kenyan banks were national economic downturn and reduced consumer purchasing power. Thus, price levels and economic growth are very important in assessing the loan repayment ability of recipients. According to Kwakwa [20] real Gross Domestic Product decline and depreciation of foreign exchange rate directly affect the repayment ability of borrowers. Furthermore, Fofack [21] stated that macroeconomic stability and economic growth are associated with diminishing loan default. Accordingly, the goal of achieving minimum loan default to ensure a healthy loan portfolio will ultimately lead to the sustainability of MFIs.

According to prior studies, MF institutional factors, factors of family and MF loan group and macroeconomic factors have been identified as the major causes of loan default in this study.

3. STUDY DESIGN

Most international as well as national studies have referred to qualitative approaches to exploring the factors influencing microfinance loan default. However, this study used the quantitative approach that expects to identify the factors affecting microfinance loan default in Sri Lanka with specific reference to the Matugama Divisional Secretariat, which was selected because it is one of the districts that obtained the highest number of MF loans in Sri Lanka.

Since the population of this study comprised MF loan borrowers in the geographical region of Matugama a convenience sampling method was used. Convenience sampling is the one of the main types of non-probability sampling methods and refers to the collection of information from members of the population who are conveniently available to the researcher for the data that the researcher is seeking.

Even though data collection started with convenience sampling, after interviewing the respondents, their references were used to identify other respondents. Therefore, at the latter stage of the study the snowball sampling method was used. A total of 133 respondents were selected among 7 GNDs under the Divisional Secretariat of Matugama in order to collect the data required for study.

3.1 Data Collection

Structured questionnaires consisting of close-ended questions were developed in line with the objectives of the study. They included income of the family, size of the family, and educational qualifications and demographic factors according to previous studies and literature [22; 13; 23]. A five-point Likert scale was used to identify microfinance institutional factors, macro-economic factors and factors of MF group and family that could impact on microfinance loan default. The language and wording of the questionnaire were aimed to elicit the responses of as MF loan borrowers. Generally, they have a low education level, poor English and use of idiom. Thus the questionnaire was designed in Sinhala and for analysis, all data and information were translated into English.

3.2 Data Analysis

The data analysis was conducted using SPSS version 22. In order to analyze and present the data, a descriptive analysis was done. The internal consistency of the study instruments and instrument subscales was measured using Cronbach’s alpha. The factor analysis was done using the principle axis factoring method to ensure construct validity.

4. DATA PRESENTATION AND ANALYSIS

4.1 Demographic Profile of the Sample

The data was collected from 133 microfinance loan borrowers. The 133 questionnaires did not have any missing value or invalid response. As for age, 38.3% of the respondents belong to the age category of more than 45 years and considered mature. The next highest age category of 31-40 years formed 24.8% of the total respondents while 18-30 years and 31-40 years categories were 19.5% and 17.3% respectively. The majority of microfinance borrowers who participated in the study had five family members including the respondent (30.1%) while the next number of members was 4 and 6 representing 22.6% and 21.8% respectively. Those with 2 family members represented 7.5% while those with 8 family members represented 0.8% including the respondent. The educational profile of the respondents indicated that the majority of respondents had completed Grade 9 and formed 51.9% of the total while 40.6% of respondents had   qualifications up to GCE (O/L). Only one graduate respondent (08. %) had obtained MF loans while 6.8% respondents had completed GCE (A/L). In respect of average monthly income   as many as 51.5% of respondents were in the income range of Rs.10, 000 – 30,000. The next highest income range was   Rs.30, 000 - Rs 50,000 earned by a percentage of 32.3%. Those in the income range of less than Rs. 10, 000 and more than Rs 50, 000 were less than those in other income ranges -4.5% and 12.0% respectively. The study further focused on borrowers who are members of the microfinance loan group. Most of the microfinance loan groups consisted of five members, that is, 54.5% of the total. Here we identified another two groups of 3 and 4 members respectively who represented 28.6% and 16.5% respectively of the total sample.

4.2 MF Loans

The main focus was on identifying the actual purpose of borrowing rather than the purpose stated in the loan application. To repair/build a house accounted for a high percentage, that is, 36.8% while 11.3% of respondents had obtained loans to start a new business and 21.8% to expand their existing business. However, the second highest percentage 30.1% of borrowers obtained loans to settle existing loans.

Next, the study focused on current status of MF group loans in order to identify trend of loan defaults. The majority of respondents (87.2%) had repaid their loans themselves and 3% had repaid their loans through group members rather than by the borrowers themselves. There were some cases (9.8%) where both borrowers and group members repaid the MF loans.

4.3 MF institutional factors (MFI)

Seven statements in the survey instrument were intended to measure MFI. The KMO value was 0.709 and p-value of the Bartlett's test of Sphericity (Chi-square=221.155, df= 21) was significant (P< 0.05). The analysis confirmed that the two-factor solution with a Cronbach's alpha of 0.741 confirmed that these statements were a reliable measure of the MFI construct. However, it was identified that the first of the two factors led to MFI consisted of the statements in the questionnaire MF12, MFI4, MFI3, and MFI5 while MFI2 led the group with its highest contribution. The second factor of the MF factor consisted of MFI6, MFI7 and MFI1 while MFI6 led with the highest contribution. In summary, 56.82% of the variance of the MFI construct was explained through the seven statements which were divided into two factors (Table 1).

Table 1: ***Explanatory factor analysis for MFI***

Item label	Statement	Factor loading		Cronbach's alpha	% variance
		Component			
		1	2		

MFI2	MF Institute has approved adequate advances/loans	0.851		0.741	56.82
MFI4	I am satisfied with the procedures that MF institute followed to approve the loan	0.767		Chapter 1	
MFI3	The loan was granted at the right time I expected	0.761			
MFI5	When I applied for the loan, MF institute estimated my total debt	0.436		Chapter 2	
MFI6	MF institute suggested to me a simple and easy instalment payment method		0.820	Chapter 3	
MFI7	MF institute arranged workshops, technical instructions and financial knowledge, after they granted me a loan		0.697	Chapter 4	
MFI1	The Interest rate of the MF Institute of my choice is more attractive than of the other institute		0.648		

Overall (Annexure 1), majority of respondents disagreed with statement that *the interest rate of the MF institute of their choice is more attractive than of another institute*. However, most of the respondents who had defaulted group loans disagreed with the statement and also majority of those who hadn't defaulted the MF group loans also disagreed with the statement. Most of the respondents agreed that the *MF institute had approved adequate loans,* according to the overall result. But most of respondents who had defaulted MF group loans were neutral and disagreed with this statement. The overall result was mostly dependent in the responses of those ones who hadn't defaulted since most of them had agreed or strongly agreed with the statement. From the overall responses most of participants agreed that the *loan was granted at the right time they expected*. However, that was mostly affected by the responses of those who hadn't defaulted. The majority of respondents who had defaulted disagreed with the statement that the loan was not granted at the right time they expected. Overall, the respondents were satisfied with the *procedure that MFI followed to approve loans*. However, the majority of respondents who had defaulted were not satisfied with the procedures followed. The overall result differs because most of the borrowers who hadn't defaulted agreed with the statement. Overall, the majority of them agreed that the *MF institute had estimated their total debt before approving the loan*. Even though those who had defaulted are neutral on this statement, the overall result is influenced by the responses of those who hadn't defaulted; the majority of them agreed with the statement. According to overall result the majority disagreed with the statement that the *MF institute suggested a simple and easy installment method*. Considering the respondents who had defaulted on MF group loans, most of them disagreed with this statement while most of them who hadn't defaulted agreed with the same statement. Most of the respondents strongly disagreed and disagreed with the statement that *MFI had not arranged workshops and training programme after they had granted them a loan*. Considering results separately, the majority of those who had defaulted and those who hadn't defaulted disagreed with the statement.

4.4 Influence of Family (F)

Table 2 gives the result of the factor analysis of the four items identified as measuring the factors of family and the MF loan group. The KMO value was 0.681 and p-value of Bartlett's test of Sphericity (Chi-square=79.987, df= 6) was significant ($P < 0.05$). Cronbach's alpha of 0.665 also confirmed that they were reliable measures of family influence. Also, F2 was the most significant item leading to the family influence constructs. In summary, these four statements explained 50.31% of the variance of family influence.

Table 2: ***Explanatory factor analysis for influence of family***

Item label	Statement	Factor loading	Cronbach's alpha	% variance
F2	My family members help me to settle the loans.	0.808	0.665	50.31
F1	I think, my total family income is sufficient to settle future total debt.	0.751		
F4	My group members encourage me to pay the loan instalments on the due date.	0.668		
F3	Members of the loan group support me to manage the credit.	0.590		

According to the overall result (Annexure 1) most of the respondents thought *their total family income was sufficient to settle their remaining total debt;* they agreed with the statement. However, the majority of respondents who had defaulted MF group loans disagreed with the above statement while the majority of respondents who hadn't defaulted MF group loans agreed with the said statement. Most of the respondents agreed and strongly agreed with the statement that *their family members help to settle their loans.* According to those who had defaulted MF group loans, the majority agreed with the statement and also there was not much difference from the responses of people who hadn't defaulted MF group loans. Most of them also agreed and strongly agreed with the statement**.** The majority of all respondents were neutral about the *support of members of the loan group for them to manage credit*. However, the majority of the respondents who had defaulted disagreed with the statement that the loan group supported them to manage credit. Most of those who hadn't defaulted MF group loans were neutral on the above statement, which affects the overall result. Overall, the result depicted that the majority of respondents strongly agreed which indicates *group members encouraged them to pay their installments on the due date*. However, most of the respondents who had defaulted MF group loans were neutral about this statement while the respondents who hadn't defaulted MF group loans strongly agreed with this statement.

4.5 Macroeconomic factors (ECO)

A total of four statements was assumed to measure the macroeconomic impact construct in this study. Factor analysis revealed a one-factor solution, with a Cronbach's alpha of 0.580, which is approximately 0.6 (acceptable) and confirming that these statements were reliable measures of ECO. The KMO value was 0.557 and p-value of Bartlett's test of Sphericity (Chi-square=74.3995, df= 6) was significant ($P < 0.05$). In summary, these four statements explained 45.95% of the variance of ECO (Table 3).

Table 3: ***Explanatory factor analysis for ECO***

Item label	Statement	Factor loading	Cronbach's alpha	% variance

ECO2	Depreciation of the rupee against the USD, have adversely affected to the ability of my loan repayment	0.871	0.580	45.95
ECO1	Inflation is adversely affecting the ability to repay my loan.	0.753		
ECO4	Political instability of the country and village level, adversely affecting to the ability of my loan repayment	0.668		
ECO3	Frequent weather changes and natural disasters adversely affect my ability to repay my loan.	0.419		

Annexure 1 shows that most of the respondents thought *the inflation effect on our economy adversely affect ability to repay their loan*. The majority of e respondents who had defaulted MF group loans strongly agreed with the above statement. Most of the respondents who hadn't defaulted MF group loans also agreed and strongly agreed with the above. Most of the respondents were neutral about the *effect of depreciation of foreign exchange rate on their ability to repay loans.* Most of the respondents who had defaulted MF group loans agreed that depreciation of the foreign exchange rate adversely affected their ability to repay their loans. However, according to the responses of the majority of those who hadn't defaulted MF group loans were neutral about the statement. Overall, the majority of respondents strongly agreed that frequent *weather changes and natural disasters adversely affecting their ability to repay*. Most of those who had defaulted strongly agreed with the statement. The majority of those who hadn't defaulted also agreed with the above statement. According to the overall result, most of them were neutral or agreed about the *political instability at the country and village level adversely affecting their ability to repay*. The majority of respondents who had defaulted MF group loans agreed with the statement while the majority of respondents who hadn't defaulted MF group loans were neutral.

5. DISCUSSION AND CONCLUSION

The main objective of this study was to identify and analyze the factors influencing MF loan default in Sri Lanka. After analyzing the collected data, the conceptual framework was changed after the factor analysis. MF institutes and their strategies were loaded into two factors: "Loan granting procedure" and "Customer services". Family influence was loaded into a single factor as expected earlier whereas statements included in the macro economy were loaded into a single factor. Furthermore, none of the statements was removed from the whole data set as each statement in the three constructs was supported by each construct.

MF institutional factors (MFI)

In the factor loading results sheet, the MFI2 statement makes the highest contribution. This statement looks at the on-loan size approved by the MF institute according to the borrower's perspective. Balogun [15] stated that loan shortfall or inadequate loan size highly affects loan default. The results of this study confirmed that most of the respondents had defaulted due to inadequate loan size. However, respondents who had not defaulted accepted the loan size offered by MFIs. These results indicate that defaulted loan holders try to obtain loans irrespective of the amount of the loan as a matter of habit. This also again adversely affects the repayment performance.

Most of the respondents who have defaulted were not satisfied with MFI's procedures followed by the MF institutes for loan approval. A proper approval process would help the MF institution to mitigate the risk of default. But other respondents were satisfied with the approval process because it is favorable to both borrowers and institutes to manage their loan portfolios and the repayment base.

Results of the study showed that MF loans were granted at the right time they expected. Olomola [14] emphasized that delays in loan delivery significantly impacts on loan repayment ability. However, borrowers in default did not agree with the statement. It seems they were applying for a loan for urgent and not for the well-planned projects or income generation. Without taking reasonable time to grant a loan causes a negative impact on the profitability of MFIs. But too much delay to deliver may cause borrowers to default.
Sheila [16] stated that inadequate financial analysis is another cause of microfinance loan default. Our study showed that both defaulting and non-defaulting borrowers agree on the estimation of the total debt of borrowers. It is vital to identify the ability to repay and avoid the risk of loan default.
In factor loading this statement leads to the construct making the highest contribution. The statement aims to look at how borrowers perceive installment methods suggested by the M F institute. According to the study, the majority of respondents mentioned that the installment method was not an easy and simple method. This fact was confirmed by Kohansal [17] who also indicated that the number of installments had a negative effect on repayment. However, microfinance officers personally visit and collect weekly and bi-weekly installments in order to mitigate default risk. But it does seem to be an easy task for borrowers to repay their loans.

The literature highlights poor loan supervision as the major cause of loan default [15]. This was also confirmed by the results of this study. Without a training and knowledge of loan management, the MF institute cannot expect their borrowers to repay their loans on time. Therefore, to minimize the loan default risk MFIs need to do proper supervision.

A loan installment consists of both principal and interest. The problem here is that the borrowers are not going to find out how much of interest is charged by the institute compared to other MF institutes. However, results of the study showed that the interest rate of the MF institute of the customer's choice is not attractive. Hence, this means MFIs charge high interest on their MF loans. Okpugie [24] and Vandel [25] also emphasized that high interest rate charged by most MFIs was the reason behind loan default. Borrowers have to pay more than what they have to usually pay. Ultimately, this adversely affects the loan repayment performance of the borrowers as well as the healthy loan portfolio of the MFIs.

5.1 Family Influence

Factor loading of F2 leads the construct to make the highest contribution. The statement was developed to identify the support of family members to repay loans. Without the support and help of family members, borrowers cannot repay their loans on time. MFIs can avoid this problem of loan delinquency by taking action to enhance the borrower's family cohesiveness; the results confirmed that this aspect directly affects the borrowers' repayment ability.

Family income (F1) also has a considerable impact on loan repayment performance. Kohansal [17] highlighted that the income of farmers has positive effect on loan repayment. This study also confirmed that the family income of borrowers is sufficient to settle remaining loans and debt without obtaining new loans. MFIs especially need to disburse credit to borrowers engaged in income generation activities in order to mitigate risk of default.

Today, almost MF loans disbursed among borrowers are based on the group loaning mechanism as collateral. This statement was constructed to know how group members contribute to the payment on installments on the due date. This result indicated that members of the group encouraged borrowers to repay their loans without delay. It seems that they try to mitigate default themselves, as stated by Besley [19].

Most of the time group members interact with each other until they obtain loans. Afterwards, they do not discuss how to manage their loans. Thus, this statement looks at the support from group members to manage their credit. The study revealed that borrowers in previous default do not have the support of members to manage credit. It may have a significant impact on the repayment performances. Therefore, interaction among group members is vital to minimize the risk of default.

5.2 Macroeconomic factors

In factor loading ECO2 leads the construct by making the highest contribution. According to Kwakwa [20], depreciation of the foreign exchange rate directly affected the loan repayment ability of the borrowers. The statement looks at how exchange rate depreciation impacts on loan repayment. The study showed that most borrowers were not aware of the foreign exchange rate and therefore their responses were neutral. However, defaulting borrowers mentioned that the foreign exchange rate deprecation only negatively impacted on their repayment performance.
Price levels in the country increase day by day threatening the living status of the people, especially low and middle level income families. If they have to pay more for goods and services, purchasing power declines. Also, repayment ability diminishes. Thus, the statement was meant to understand the impact of inflation on repayment performance of loan holders. As illustrated by Waweru [18], inflation reduces purchasing power and result of the study also showed a negative impact on loan repayment performance.

According to Fofack [21], macro-economic stability diminishes the level of loan default. The statement was designed to look at how political instability in the country affects repayment performance. The study revealed that political instability in the country and at village level has not much of an impact on loan default. It seems that repayment performance of borrowers does not depend on political parties or their actions.

Sri Lanka as well as the Matugama region has to face frequent weather changes and natural disasters. Consequently, the study specially focused on weather and natural disasters. The majority of respondents who either defaulted or did not default on loans agreed with the statement which referred to frequent weather changes and natural disasters adversely affected the ability to repay loans. It appears that people are highly involved in activities affected by weather changes and natural disasters.

This study contributes to the knowledge of microfinance even though the subject has been well explored qualitatively by ample research. MF is a mature field now and loan default has become an emerging issue. The quantitative model developed by the researcher can in future be expanded with a much larger sample. In this study the researcher developed some variables and factors that influence loan defaults in a developing country in the South Asian region. Therefore, emerging economies and future researchers can use this as a base.
Managers of MFIs can identify the most important factors affecting loan default with reference to the perspectives of the borrowers. According to the findings and results of the study, there are many borrowers who have already defaulted on loan repayments but obtain new loans from different institutes. Before granting a loan, a proper appraisal process should be conducted by the MFI's loan officers. MFIs should follow clear and effective credit or lending policies and procedures and must be regularly reviewed. The results of this study suggest that managers explore new customer bases rather than searching for and offering loans to existing customers in the interests of risk management, which means mature borrowers, are not guilty of serious default issues because they know that group members may repay on their behalf if they are in arrears. The formation of strong solidarity groups is a possible remedy for high default and MFIs must supervise and review each and every loan

borrower while providing training and workshops for better performance. Otherwise, they obtain loans for different purposes and cause trouble with repayment. Loans should be granted to people involved in income generation activities. The results of this study confirm that most of MF loans are for the purpose of settling other loans, which means their repayment ability is very low.

Governing bodies and policy makers can take action to minimize the risk of loan default of the MF sector. The government should endeavor to ensure their success and wealth by formulating policies that create a favorable environment for businesses and financial institutions to operate. Regulatory authorities should take action to control MFIs in order to create a favourable business environment, especially a favourable interest rate mechanism and workshops for credit management. Also, policy makers and regulatory officials should prepare standards and minimum requirements for granting MF loans a second time. The intention of borrowers who have already defaulted on loan repayments is to obtain loans at any time at any cost from anywhere. Furthermore, the study reveals that loan holders who are already in default have obtained loans again. This is a serious issue of default in the Sri Lankan context. Therefore, this study suggests that policy holders and regulatory bodies like the Central Bank to grant access to the CRIB report for formal MFIs to avoid loan delinquency.

Despite the contributions of this study, as listed above, there are certain limitations that need to be noted. A paper-based questionnaire fails to gather qualitative information such as inner feelings and perceptions of respondents about the hidden reasons behind loan default with MF institutions in Sri Lanka. Therefore, future researchers could use longitudinal research to understand the changes in borrowers' perceptions and behaviours as well as MFIs' perceptions over time. Data was collected from only from loan borrowers. Other stakeholders such as MFI managers, executives, family members of loan borrowers and group members can help to understand the true picture about loan defaults. Hence, future researchers could consider data collection from a diverse pool of respondents in order to receive better results and to develop a model that explains factors influencing loan default in Sri Lanka.

COMPETING INTERESTS

Authors have declared that no competing interests exist

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APPENDIX

Table I: Summary of Mean and SD for each of the statement in the questionnaire

Item label	Micro finance institutional factors	Mean	Std. Deviation
MFI1	The Interest rate of the MF institute of my choice is attractive than the other institute	2.92	1.271
MFI2	MF Institute has approved adequate advance/ loan	3.51	1.132
MFI3	The loan was granted at the right time I was expecting	3.55	1.055
MFI4	I am satisfied with the procedures that MF institute followed to approve the loan	3.23	1.193
MFI5	When I was applying the loan, MF institute estimated my total debt	3.57	.932
MFI6	MF institute suggested to me a simple and easy installment payment method	3.19	1.194
MFI7	MF institute arranged workshops, technical instructions and financial knowledge, after they granted me a loan	1.89	.987
	Average	**3.12**	**1.109**
F1	I think, my total family income is sufficient to settle future total debt.	3.55	1.177
F2	My family members help me to settle the loans.	3.70	1.161
F3	Members of the loan group support me to manage the credit.	2.92	1.122
F4	My group members encourage me to pay the loan installments on the due date.	4.05	.960
	Average	**3.56**	**1.105**
ECO1	Inflation is adversely affecting the ability to repay my loan.	3.96	1.157
ECO2	Depreciation of the rupee against the USD, have adversely affected to the ability of my loan repayment	3.11	.994
ECO3	Frequent weather changes and natural disasters adversely affect my ability to repay my loan.	4.02	.961
ECO4	Political instability of the country and village level, adversely affecting to the ability of my loan repayment	2.88	1.181
	Average	**3.49**	**1.073**