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Factors affecting repayment performance in microfinance programs in Malaysia

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Abstract

This paper attempts to determine the factors affecting repayment performance in microfinance programs in Malaysia by using a multinomial logit regression model. The data used in this study is gathered through a survey on 309 respondents of TEKUN Nasional clients in Peninsular Malaysia. Results of the study indicate that gender, formal religious education, distance to the lender office, business formality, total sales per month, total loan received, loan monitoring and loan disbursement lag have significantly affected borrower's repayment performance. The result also shows that no pressure from Microfinance Institutions to pay the loan may cause the clients delayed their payment or just pay at a minimum amount. Besides, 11 percent of respondents also admitted that they not fully utilised the loan given for business that makes them finally default. The study suggests rebate should be given to the good borrowers to encourage them to repay their loan on schedule without delay and the establishment of a formal specialized microfinance banking institution to cater for the financial needs of micro and small entrepreneurs, especially in Malaysia.

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Keywords: repayment performance, microfinance programs, Malaysia;

1. Introduction

Microfinance institutions (MFIs) were established to fill the gap in the financial services' sector by providing funds to the lower-income group which are usually involved in small and micro business activities. The MFIs provide funds for start-up business or for working capital purpose such as to buy raw materials, machine and business equipment. Majorities of MFIs are from semi-formal institutions and informal institutions that are not profit-oriented organisation. Usually they receive funds from government, local government and donors to run their activities. Therefore, many of MFIs are not sustainable and too dependent on subsidies. However, MFIs should be sustainable and viable to make sure they can continually provide financing to small and micro entrepreneurs without depending on donors and government. Financial sustainability is a prerequisite for making micro financial services permanent as well as widely available (ICC, 2001). The repayment performance is important to make sure that the MFIs are operated in a sustainable basis. It is therefore, the objective of this paper is to determine the factors affecting repayment performance in microfinance programs in Malaysia, which using individual lending approach.

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Repayment performance refers to the total loans paid on time as stated in the loan agreement contract. Godquin (2004) defines repayment performance in terms of binary variable; based on an arbitrary definition of what constitutes repaying "on time" (a given maximum "grace period" is allowed). While, Guttman (2007) measures repayment performance based on the degree of arrears.

2. Literature Review

The majority of literature on repayment performance of MFIs focused on group-based lending or group liability because the group-based lending is a synonym with microfinance activities such as Ghatak & Guinnane (1999), Godquin (2004), Sharma & Zeller (1997), Zeller, (1998), Besley & Coates (1995), and Silwal (2003). Much theorising has been done to show the advantages of group loan in minimising the default rate compared to an individual loan (Ghatak, 2000; Ghatak & Guinnane, 1999; Besley & Coate, 1995; Maata, 2004). Much of the study emphasized the role of joint liability in group lending, such as peer selection (Ghatak, 1999), peer monitoring (Stiglitz, 1990; Varian, 1990; Banerjee et al., 1994), and peer enforcement (Besley & Coates, 1995). It proved that through group lending, it could mitigate moral hazard, adverse selection and information asymmetries faced by the MFIs. Microfinance programs that used peer selection, peer monitoring, dynamic incentives, regular repayment schedules, and social collateral help maintains high repayment rates (Silwal, 2003). However, little study has been conducted on the issue of the credit worthiness of the individual lending design applied by microfinance institutions. Research on the determinants of loan repayment defaults in individual-based lending schemes can be found only for rural banks or semi-formal financial institutions (Suraya Hanim Mokhtar, 2011).

However, in the recent studies, the results have been shifted. Armendariz de Aghion & Morduch (2000) argue that direct monitoring, regular repayment schedules, and the uses of non-refinancing threats are the elements to generate high repayment rates from low income borrowers without requiring collateral and without using group lending contracts that feature joint liability. Chowdhury (2005) theoretically shows that without sequential financing, group lending may suffer from under-monitoring with borrowers investing in risky projects. The most important factor inciting lending groups to repay is the relative value they attach to access to future credit (Diagne et al., 2000). Mersland & Strom (2008) find that MFI tends to choose group lending when its main market is rural, when it prefers female borrowers, and when the average loan amount is small. The studies show that group-based lending approach cannot ensure high repayment rate in MFIs. There are several reasons behind high default rates such as the borrowers unwilling or unable to repay the loan (Greenbaum & Thakor, 1995; Coyle, 2000). Sterns (1995) argued that the cause of high level of non-repayment rates is the lender itself not the borrower. She also noted the importance of "uncontrollable" factors such as natural disasters and personal crises affecting the ability to repay a loan.

3. Research Methodology

The study chooses micro finance programs offered by Tekun Nasional (TN) because TN is the largest microfinance institution in Malaysia that offers microfinance based on individual lending approach. Data of 309 respondents were obtained through a multistage random sampling in Peninsular Malaysia that was conducted from November 2010 to February 2011. The study used mixed methods, which include a questionnaire surveys among participants, structured interview with TN staffs and interview and participant observation for selected participants. The mixed method is considered to be very efficient in answering research questions compared to the quantitative and qualitative approached when used in isolation (Creswell, 2002). Furthermore, by using a mixed method approach at different stages of research, any bias that exists in any single method can neutralize or remove the biases For the analytical purpose, the repayment statuses were classified into three categories namely paid on time for the borrowers who repaid as at when due, delinquency for the borrowers who repaid late from the due date or repaid less than the appropriate amount and default for the borrowers who not paid after three months of the due date. The data is based on their credit status on sampling date. The variables which significantly affect repayment performance are determined as follows:

Y = *f* (gender, age, educationlvl, religiousedu, totalincome, distance, registerSSM, totalsales, TotalLoan, visitbuspremise, loanapproval)

Where,

Y = repayment performance with values reflecting the repayment status of the borrowers either 1 (paid on time), 2 (delinquency) and 3 (default).

Gender	= sex of the borrower (1 for male and 2 for female)
Age	= age of the borrowers (in years)
Educationlvl	= education level of borrowers (1 for secondary and below and 2 for certificate/diploma and above)
Religiousedu	= borrowers have formal religious education (1 for yes and 2 for no)
Totalincome	= Monthly total household income (in RM)
Distance	= distance of borrowers business premise with lender office (in km)
RegisterSSM	= either borrower's business register with SSM (Companies Commission of Malaysia) (1 for yes and 2 for no)
Totalsales	= monthly total sales (in RM)
TotalLoan	= Total loan received
Visitbuspremise	= number of times MFI staff visit borrower's business premise in a month
Loanapproval	= either loan approval as promised (1 for yes and 2 for no)

The study used multinomial logit regression method where multinomial logit regression exists to handle the case of dependents with more classes and does not have a natural ordering. In this study, the dependent variable was divided into three ordinal variables defined as follows: $y_t = 1$ if there is no repayment problem and $y_t = 2$ if exist delinquency and $y_t = 3$ if exist default. The study follows Mlogit technique by Menard (2001), and Borooah (2001).

4. Data Analysis and Discussion

The mean age of the respondents is 42 and most of the respondents are married. 178 respondents are female, and the rests are males who contribute 131 from total respondents. In terms of education level, the majority of respondents just finish their secondary school and below. The average of respondents has nine-year business experience and the average of total household income per month is RM4, 453 (USD1484). In terms of business location, the majority of respondents operate their business in rural areas where most of them involved in services and retail activities such as retail shop, hawker stalls, salon and restaurant. Based on 309 respondents, 151 (49%) respondents are categorised as good borrowers, while 103 (33%) respondents are in arrears and 55 (18%) respondents are default borrowers.

In terms of factors affecting repayment performance in microfinance program in Malaysia, the result shows that age, formal religious education, total income, business formality has a negative coefficient while, gender, business experience, distance to the lender office, number of time visit and loan approval have a positive coefficient as shown in Table 1. A positive coefficient indicates that the variables are associated with a higher probability of being in the on-time paid category than that of being in the default category. On the other hand, a negative coefficient indicates that the variables are associated with a lower probability of being in the on-time paid category than that of the default category. The result shows that formal religion education, total income, register with SSM, total sale, total loan, and loan approval has higher probability of being in the good borrowers than in the bad borrowers. While gender, age, education level, distance to the lender office, and loan monitoring have lower probability of being in the good borrowers than in the bad borrowers. However, only five variables are statistically significant namely RelegiosEdu, Distance, TotalSales, TotalLoan, and VisitBusPremise.

The result shows that borrowers who have formal religious education are more responsible to repay their loan. This is because in Islam, responsible to pay debt is highly important where even the borrowers were dead, they still have to pay their debt or their spirit will be hanging. The finding also shows that distance from the lender office with borrower's business will influence borrower's repayment performance, and the result is consistent with previous microfinance research (Bhatt & Tang, 2002; Oke et al.; Derban et al.) where the closer to the lender office, the higher possibility of borrowers to repay their loan. Being closer with a lender's office, will give an extra advantage to the lender, and borrowers. This is because it is easy for the lender to monitor borrower's business and for borrowers to repay their loan. In terms of total sales, the result shows that borrowers who earned more profit are more creditworthy. The result is in line with studies that have been done by Von Pischke (1991) and Nannyonga (2000). While, the higher the total loan received by the borrowers, the higher probability of borrowers to pay their loan on time. This is because the borrowers have enough funds to finance their business that makes them get more profit and increase their business profile.

In the delinquent category, variable gender, register with SSM, total sales and loan approval are statistically significant. The result shows that borrowers who not register their business with SSM, and earned less profit are more likely to be in default category. With regards to gender, the finding shows that female borrowers have higher probability of being in the delinquent category. The result is contradicted with the most previous result that found female borrowers are more creditworthy than male borrowers such as Sharma & Zeller (1997), Papias & Ganesan (2008), Derban et al., (2005), and Roslan & Mohd Zaini (2009). This situation happened because of some of the women entrepreneurs in this study might have been engaged in high risk or low return activities or have personal problems such as divorced, husband death, and giving birth that disrupt their business activities. Besides, the study shows that period of loan approval is important to determine borrower's repayment performance where delay in loan approval may affect borrower's business that causes the borrowers cannot pay their loan.

Besides, the study also found 11 percent of respondents admitted that they not fully utilised the loan given for business that makes them finally default. In addition, little pressure from the lender may reduce the delinquent and default problem where the study found that no pressure from MFI to pay the loan may cause the clients delayed their payment or just pay at a minimum amount. This is related to the borrower's attitude to escape from paying their loan.

Table 1: Multinomial Logit Estimate of Loan Repayment Performance

Variables	Delinquents			Defaulters		
	Coefficient		Z	Coefficient		Z
Gender	0.503820	*	1.812	0.351021		0.9480
Age	-0.0131937		-0.8445	0.0110987		0.5647
Educationlvl	-0.0994683		-0.2644	0.216584		0.4061
ReligiousEdu	-0.311414		-1.285	-0.628734	**	-2.039
TotalIncome	-2.05458E-05		-0.6335	-0.000148827		-1.622
Distance	0.0180713		1.415	0.0492854	***	3.109
RegisterSSM	-1.238900	**	-2.225	-0.498542		-0.8123
TotalSales	-0.000143	**	-2.176	-0.000461264	**	-2.475

TotalLoan	0.0000168		1.034	0.0000617145	***	3.364
Visitbuspremise	0.256011		0.1720	0.256011	**	2.124
LoanApproval	-0.203023	*	1.767	-0.203023		-0.5043

*** Significant @ 1% level, ** significant @ 5% level, * significant @ 10% level
Likelihood ratio test: Chi-square(22) = 84.8782 [0.0000]

5. Conclusions and Recommendations

The study analysed the factors affecting repayment performance in microcredit programs in Malaysia. The study uses a sample from TEKUN Nasional programs. The result of the study shows that there are ten factors that affecting the repayment performance of the borrowers namely age, gender, business experience, religious education, total household income, total sales, distance to the lender office, the formality of business, period of loan approval and loan monitoring. The study found that improvement in income and total sales will increase the repayment performance of borrowers. Therefore, by providing training to the borrowers such as how to market their products, financial management and accounting course will help them improve their business and increase their profits. The study suggests TN give a rebate to the good borrowers to encourage them to repay their loan on schedule without delay. This rebate can reduce borrower's attitude to try to escape from paying full amount on time or delay the payment. Besides, the study suggests the establishment of a formal specialized microfinance banking institution to cater for the financial needs of micro and small entrepreneurs especially in Malaysia that used both group lending and individual lending approach. The study found that small credit given to the microentrepreneurs was helping them improve their business and encouraged the poor to involve in business activities.

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