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PERSONAL CHARACTERISTICS, BUSINESS CHARACTERISTICS AND LENDER-BORROWER RELATIONSHIP – A STUDY ON MICRO FINANCE INSTITUTIONS OF EAST JAVA, INDONESIA: DOES IT MATTER IN REPAYMENT PERFORMANCE?

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ABSTRACT

One of the main objective of Microfinance Institutions (MFIs) as a complementary financial institution is helping existing business growth and encouraging the development of new businesses that generally have difficulty to access financial services in banking. The customers with no banking experience and unknown creditworthiness become the main problem causing disruption of institutional operational sustainability. The purpose of this paper is to determine the factors contributing to credit repayment behavior among the clients of MFIs in East Java-Indonesia, who have a business in micro and small-scaled. A descriptive and inferential statistics is employed to investigate the relationship of association between the probability of respondents' loan repayment performance and the borrower characteristics' factors on three main categories: personal characteristics, business characteristics and lender-borrower relationship. The results from the tested empirical model show that gender, age, marital status, business experience and distance have a strong effect on loan repayment performance (statistically significant at $p=0.05$). The remaining factors have logical and explainable effect but are not statistically significant.

KEY WORDS

Borrower characteristics, repayment, performance, microfinance institutions.

Like other developing countries, SMEs in Indonesia have a significant contribution for economic development through creating jobs and wealth in an economy generating local employment opportunities. In 2015, it was approximately 55.2 million SMEs active in Indonesia. It figures more than 99.98 percent of all enterprises and employs 97.3 percent of total workforce. Compared to large enterprises which accounted to 4.8 million (0.02% of total units) and absorbed 2.8 million (2.7%) labor force. The performance of SMEs is also figured in GDP as a general indicator for economic growth, which contributed 57.12% of total business production. By sector, the largest GDP contribution of SMEs is in agriculture, followed by trade, hotel, and restaurant; finance and retail; electricity, gas and water and mining (Ministry of Cooperative and SME Republic Indonesia, 2015). It is clear that SME is the pillar of the economy, it must be kept and maintained by giving more attention to its capacity.

The most problems faced by Small Medium Enterprises (SMEs) are access to external capital and manage their resources. Those are the impact of their characteristics that mostly of the business owners are personally relies on internal financing, low productivity, located in rural areas, and dominated by women with self-employment without wage-paid workers (Tambunan, 2011).

The established of Microfinance Institutions (MFIs) fill the gap in the financial services sector for SMEs. With the major objective is to provide the financial services to the poverty section those un-served or underserved markets, which include reducing poverty, empowering women or other disadvantaged population groups, creating employment, helping existing business growth and encouraging the development of new businesses (Ledgerwood, 1998).

Repayment becomes the most important performance indicator of MFI, since a high profit as an indicator to attain self-sustainability of institution could not be achieved in a short

(Yaron, 1994). The problem of repayment in financial institution is the most important factor as it influences 54% in total credit risk influence (Musyoki & Kadubo, 2012). It also becomes a critical issue in the area of MFIs since the high loan default rate is the main cause of the failure of MFIs (Marr, 2002).

Indonesian Banking Statistics reported that MFIs credit quality was not as good as the commercial banks (Bank Indonesia, 2015). The non-performing loan (NPL) ratio of MFI since the last five years nearly doubled from commercial banks. The NPL ratio of conventional bank was 2.16 percent in 2012 rose to 2.7 percent in 2015. While NPL ratio of MFI was quite high, from 4.75 percent in 2012 rose to 5 percent in 2015. A high number of NPL would obstruct the quality of MFIs, consequently it would reduce the confidence level of a third party as donors. They will measure the level of liquidity from the ratio of NPL. Because, the higher the NPL ratio, the lower the liquidity of the funds owned by third party.

Study on factors affecting borrower's loan repayment showed mixed result. Many researchers stated that individual's or borrowers' characteristics as the main factors contributed to repayment performance (Chong & Suhaimi, 2011; Roslan & Karim, 2009). Other results reported that the default arising from the lender's aspect that can be cause of poor management of institutional and how the MFI designed the loan (Nawai & Shariff, 2013). Some studies have resulted both borrower's characteristics as well as MFI characteristics affected the repayment performance in term of ability of borrowers to repay (Bhatt & Tang, 2002; Oke, et al, 2007).

The present study examines the probability of credit repayment behavior of MFI's borrowers, especially borrower with business in small and medium-sized, whether they repay on time otherwise on default, in terms of borrower characteristics variables and serves a useful function for creditworthiness. Our study is unique and important in many aspects. First, not many studies are conducted to investigate the relationship between the characteristics of the people that are already accepted (client) and whether they are paying back their loans whereas most previous research has been done on consumer credit applicants. In addition, we included lender-borrower characteristics variable additional, while most of the previous studies done on clients' payment performance dwell upon only demographic variables. Moreover, it is common that study on repayment in MFI is related to group-based lending, but not all MFIs offer the service. Repayment performance on individual lending also important due to the liquidity of MFI that ensure the cyclical of cash flow between MFI and borrowers was not interrupted.

LITERATURE REVIEW

The consumer behavior approach offers a view of human behavior that is more subtle and complex than that found in conventional economic theory (Mankiw, 2008). Consumers behave are rarely from the result of single motive. The combination of several factors then reflects and leads the attitude and intention to behave. The cultural environment also influences what motivates consumers then process the information n to any kinds of decision. Age, gender, social class, ethnicity, families, friends, and other factors affect consumer values and lifestyle and, in turn, influence the decisions that consumers make and how they make them (Mankiw, 2008). Moreover, Eze & Ibekwe (2007) support that socio-economic factors of loan beneficiaries often govern their loan repayment performance.

How borrower to behave on their loan also because of the accumulation of payment incentive problems. According to Laureti (2011) there are two situations in which leading to payment incentive problem. It argued that ex-ante as well as post-ante moral hazard could act as stimulus for borrowers to pay their loan incomplete. Ex-ante moral hazard refers to a situation when the loan was disbursed to the borrowers, and they did not put a great effort for their business then they face lack of success, it will effect on the revenue then have a problem to reimburse the loan. On the other hand, the post-ante is about the borrower do not have a willingness to repay even though they have sufficient budget. Moreover, payment incentive problem in MFIs also comes about the characteristics of the poor which difficult to safe because of external and internal factors (Karlan, 2005).

Regarding lender and borrower relationship, the relationship lending theory stated that strong lender-borrower relationships are generally reflected a valuable asset because of accumulating private information and establishing close ties between lender and borrowers (Elsas, 2005). The proxy of this relationship commonly is measured by the duration of lender-borrower relationship. The duration reflects the degree of relationship intensity and private information accumulation over time resulting reduce asymmetric information problem. The related research to repayment performance on MFI will be briefly discussed below:

Bhatt & Tang (2002) observed four microcredit programs in United States using logistic model to test the hypotheses related to relationship between several socio-economic variables and loan repayment in group-based lending scheme. The explanatory variables included borrower characteristics (gender, borrower education level, household income, formality of business, years in business and proximity of business to the lending agency) and the lending characteristics (the perceived of loan disbursement before disbursement, homogeneity, preference and sanction). The test indicated that educational level and physical proximity to the lending program have statistically significant and have positive sign on repayment performance.

Using secondary data, study of Ozdemir & Boran (2004) determined factors influencing the credit default risk of borrower of one of the biggest banks in Turkey in individual lending scheme. The results found that female borrower, married clients, and older borrower likely to pay their installment on time. The study also showed that income had a negative and statistically significant effect on client's payback performance. It also detected that the bigger the loan the better the repayment.

Oke, Adeyemo, & Agbonlahor (2007) employed linier multiple regression from 200 member of MFI to determine the variables that affected microcredit repayment in individual lending program. The following variables are indicated significantly influence repayment at the level of 0.05: income, distance between dwelling place and bank, amount of business investment, socio-cultural expenses, amount of loan borrowed, access to business information, penalty for lateness to group meetings, membership of cooperative society, number of days between loan application and disbursement and poverty indicator were analysed.

A study case on Amanah Ikhtiar Malaysia, an institutionalized and registered as Non-Government Organization (NGO) which is provided financial services to poor and hardcode poor to determine factors contributing to repayment problem of the borrowers. Using a structural equation model, the study found that a negative linear relationship between repayment problem with uses of loan in income generating activities, household income, number of gainfully employed members, and number of sources of income (Al-Mamun, Wahab, Malarvizhi, & Mariapun, 2011).

Based on the theory and previous research above, this study examines factors influencing the behavior of borrower to repay the loan they borrow from MFIs on three main categories: personal characteristics, business characteristics and lender-borrower relationship (figure 1). Following are some empirical studies in this regard.

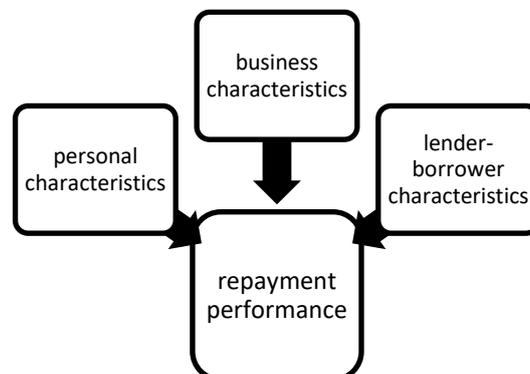


Figure 1 - Model Conceptual

METHODS OF RESEARCH

Both exploratory and descriptive designs were employed. The study employed crosstab analysis and Cramer's V-test to analyze the relationship between loan repayment and explanatory variables among MFI's borrowers with small-medium scale business.

The population of this study is borrowers on four randomly selected MFI on East Java, Indonesia. Incidental sampling method with purposively criterion was employed to find out the sample. This gave a total sample size of 215 respondents selected for this study. The survey was carried out between January and March 2016.

Choice of explanatory variables and theoretical expectation. We assume that personal characteristics (proxy by demographic and socio-economic variables) such as: gender, age, marital status, number of dependants, level of education, are likely have effect on the probability of the borrower's credit repayment status. Furthermore, we also suppose that business characteristics variables like: business location, type of business, experience of business activity and relationship between borrower and MFI variables like: MFI's membership and distance between member's house and MFI's office are also likely to influence the borrower's repayment behavior.

The dependent variable (credit repayment behavior) is categorized with two values; "1" indicates the borrower repays the credit on-time within a last year repayment and "0" indicates the absence of the event. The respondents in the sample are assumed to be categorized independently of each other.

The hypothesized of association between the probability of respondents' credit repayment behavior and the explanatory variables (borrower characteristics) is expected in the table 1.

Researchers have argued that female borrows tend to have higher repayment rate than man (Roslan & Karim, 2009). They generally have a work-hard type and the culture of financial discipline (Bhatt & Tang, 2002) and they likely to choose the projects with less in risky (Zeller, 1998). Compared to man, women are also doing well in budgeting their income at the household level. So, we expect that women are likely to repay their loan better than men.

Previous studies provided evidence that the borrower's age had a meaningful role in explaining delinquency. Study from Baklouti (2013) implied that probability of default decreases with the increases in borrower's age. It is understandably since the older is assumed wiser, more responsible, more risk adverse as well as more knowledgeable than the young, which lead them to be less likely to default (Baklouti, 2013).

The sign of the relationship between marital status and repayment performance shows uncertain. It is often assume that married couple as a sign of responsibility, reliability or maturity on the part of borrowers so asthey tend to pay back their loans better than the borrower with single status (Baklouti, 2013). Next that with couple the earning income capacity will increase and lead to a stable flow in income and they are simply more diligent (Ozdemir & Boran, 2004). On the other hand, since married couple is together with the increase in number of family, this condition assumes that ability to pay will decrease.

In the case of family size, the probability of default rose as the number of children increases (Papias, 2009). The income earning capacity automatically diminishes with the number of households increase and it will lead to credit unworthy (Zeller, 1998). Thus, we suppose the increase of umber of family of dependants will decrease the loan repayment ability to pay on-time of the borrowers.

Regarding the educational level, the better in education, the better the ability for entrepreneurs to understand and analyze complex information enabling him/her to make the right business decision (Bhatt & Tang, 2002). Therefore, we expect that borrower with higher formal education may lead to the greatest financial success and effect to the better to complete the repayment due date.

Agriculture is assumed to be the safest sector due to the higher social control and typical lower volatility. Services and small trades are assumed to be positively related to the categories with high default risk owing to their inherent volatility and their dependence to a

certain degree of technology (Baklouti, 2013). On the hand, Eze & Ibekwe (2007) argued that agriculture involves great risk and uncertainties. Therefore they tend to low in loan repayment performance.

Entrepreneurs who have been in business longer are more experience in adoption innovation imply to productivity and expected to have more stable in sales and cash flow than who have been a start-up (Okurut & Kinyondo, 2009). This will increase the income capacity. Therefore, entrepreneur with the longer experience in running a business would likely to be avoided from financial problem and be more regular to pay back loans. Thus we expect that the more the experience in business of the borrower the better the repayment performance.

The length of time that clients stay with a given MFI reflects the strength of relationship between the institution and the clients. The stronger the relationship, the more likely are the clients to repay their loans on time so as to guarantee access to future financial services (Okurut & Kinyondo, 2009). Geographic distance between borrower and lender make information gathering, visitation and monitoring to borrowers especially to business entity more costly and less effective (Chong & Suhaimi, 2011). Similarly, the closer the entrepreneur's business is located the easier the lender to provide a technical assistance due to avoid the financial problem. We suppose the larger the distance from borrower's home to MFI's office the poorer the repayment performance.

Table 1 - Definition of Explanatory Variables

Variable	Symbol	Variable definition	Exp. sign
Gender	GEND	1 if female 0 otherwise (male)	(+)
Age	AGE	1 if 0-45 years old 0 otherwise (more than 45 years old)	(+)
Marital status	MARITAL	1 if single 0 otherwise (married)	(+)
Number of dependants	DEPT	1 if number of dependants family 1-5 people 0 otherwise (number of dependants family more than 5 people)	(+)
Level of education	EDU	1 if level of education is bachelor or higher than bachelor 0 otherwise (level of education is less than bachelor)	(+)
Business location	LOCATION	1 if in rural area 0 otherwise (in urban area)	(+)
Type of business	TYPE	1 if non-agriculture area 0 otherwise (agriculture area)	(+)
Experience of business activity	EXP	1 if years running the business is equal or more than 5 years 0 otherwise (years running the business is less than five years)	(+)
MFI's membership	MEMBER	1 if years as MFI's member is equal or more than five years 0 otherwise (years as MFI's member is less than five years)	(+)
Distance between member's house and MFI's office	DISTANCE	1 if distance between borrower's house and MFI' office is equal or less than 10 km 0 otherwise (if distance between borrower's house and MFI' office is more than 10 km)	(-)

RESULTS AND DISCUSSION

From 215 respondents' respond, 159 demonstrated on-time repayment accounting for 74 per cent of the total sample, while 56 respondents demonstrated late repayment. This is equivalent to 26 per cent of the total sample.

The study showed that good repayment performance have been demonstrated by borrowers who have characteristics: female, less than 45 years old, married, live with no

more than 5 (five dependants) and have at least bachelor degree in education. The other important information that borrowers who run their business in rural and non-agriculture area with already run their business more than 5 years tend to behave a good repayment. Regarding lender-borrower relationship, it showed that borrowers who already join as MFI's member more than 5 years and their home is nearby MFI's office perform on-time to pay back their loan.

Table 2 - Descriptive Statistics and Cramer-V test

Variable	Value	Frequency		Expected Value		Sign.
		On-time (%)	Late (%)	On-time (%)	Late (%)	
Gender	Female (1)	72	52	80	20	0.005**
	Male (0)	27	48	62	38	
Age	< 45 years (1)	71	41	58	42	0.000**
	> 45 years (0)	29	59	83	17	
Marital Status	Single (1)	47	66	63	37	0.012*
	Married (0)	53	34	81	19	
Number of Dependants	< 5 (1)	59	59	74	26	0.954
	> 5 (0)	42	41	75	25	
Level of Education	> Bachelor (1)	86	14	84	16	0.078
	< Bachelor (0)	74	86	71	29	
Business Location	Rural (1)	51	52	74	26	0.914
	Urban (0)	49	48	74	26	
Type of Business	Non-Agriculture (1)	69	64	75	25	0.558
	Agriculture (0)	31	36	71	29	
Experience of Business Activity	> 5 years (1)	71	30	87	13	0.000**
	< 5 years (0)	29	70	54	46	
MFI's Membership	> 5 years (1)	51	57	72	28	0.424
	< 5 years (0)	49	43	77	23	
Distance between Member's House and MFI's Office	< 10 km (1)	94	79	77	23	0.001*
	> 10 km (0)	6	21	72	28	

Note: ** (sign. at 1% level) * (sign. at 5% level)

The relationship between the business characteristics and loan repayment default is examined by testing the stated hypotheses using statistic Cramer-V test with 95% confidence interval. Table 2 showed the result of cramer-v test to analyze the hypothesis. There was a significant relationship between gender, age, marital status, experience and distance and repayment performance. The rest of explanatory variables have less or/and did not significantly play a role in the repayment behavior.

As expected, female borrower are more likely to repay on-time than male. This result support a research conducted by Roslan & Zaini (2009) as well the research's result by Salam and Zeller (1997). Female worker likely to choose the project with less in risky also doing well in budgeting their income at the household level eventually will effect on the repayment and more discipline. In addition, less access for women entrepreneurs to bank or formal finance institution to fulfill external capital, make them to look after the trust and access to MFI by keeping paying on time.

The age also appears to have significant effect on repayment behavior. Borrowers with group less than 45 years old are to be on-time to repay the loan than the oldest group. This could be due to the fact that younger people are in the condition that still has full energy for work hard and have increasing productivity. Moreover, the younger borrowers are expected to be more knowledgeable and more independent. So this group is perceived to produce better financial performance, consequently they are able to pay the loan on time.

The association between marital status and repayment behavior has a positive sign and statistically significant. This finding supports a research conducted by Baklouti (2013) that single borrowers tend to be less responsible and have a worse repayment behavior than the married.

Borrower with experience in business more than six years is indicated has a good on repayment than the start-up (less than 6 years running the business). Borrowers who have been in business longer are expected to be more successful with their enterprise. They have more stable sales and cash flows than those who have just started. Thus, those who are more experience have more to be have more profit. Thus their ability the repay their loans is also increase. In line with Eze & Ibekwe (2007), in farmers' repayment behavior, farming experience as a proxy in measuring the management ability of farmers can influence loan repayment to a consideration extent.

CONCLUSION

The discussion about the determinant factors contributing to repayment performance gives conclusion that female and married borrower are more likely to repay on-time than male. Other important result shows that the younger borrowers tend to be on-time to repay the loan than the older. The years on running the business also has a significant effect on repayment. Borrower with longer experience in business is indicated has a good on repayment than the beginner. Furthermore, a strong bonding between borrower and lender also influence significantly on how the borrower to behave on their repayment. Those who have more years as MFI's client tend to be repay on time than less. To sum up, due to sustainability, MFI should focus on the borrower and business characteristic as well as maintain the relationship between lender and borrower.

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