

Determinant of micro, small and medium enterprises on carrying out a credit loan in Jambi Province

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Abstract

This study aims to analyze the determinant of micro, small and medium enterprises (MSMEs) on carrying out a credit loan. Primary data has been used in the analysis. The population in this study were all MSMEs in Jambi Province. Samples were taken by purposive random sampling. Total sample are 276 consisting of 163 MSMEs actors who took credit and 113 MSMEs actors who did not take credits. To analyze the factors that influence the taking of credits, a binary logit model is used. The dependent variable is the taking of credits, while the independent variables are household characteristics and individual characteristics of MSMEs actors. The results showed that the factors significantly affected the MSMEs on taking credit were the side job variables, working hours, working partners, gender, education, long established business, household expenses and account ownership.

Keywords: *MSMEs, credit, household characteristics, binary logit*

JEL classification: G21, M21

INTRODUCTION

Micro, small and medium enterprises (MSMEs) have an important role for development in Indonesia, this can be seen from the large number of business units in all economic sectors reaching 59,304,787 units in 2013, and their large contribution to employment and income opportunities, especially in rural areas and for low-income families. One common feature inherent in MSMEs in Indonesia is that capital is still weak. In weak economic circles there are usually problems that are lack of capital, that so often experience obstacles and difficulties in developing their business. Capital is a very important factor in supporting the production and performance of MSMEs itself, especially on micro-entrepreneurs and traders economically weak groups (small businesses) (Tambunan, 2012)

The results of the Bank Indonesia Survey, Year 2010, show that the number of MSMEs that access formal capital is still low. One indicator can be seen from the number of MSMEs credit accounts in banks which are the main formal sources of financing as many as 9,078,322 accounts in 2012. This figure is only 16% of the total MSMEs of 56,534,590 business units. The proportion of MSMEs loans in total bank credit in the same year was only 19.9%.

The total allocation of bank credit for MSMEs and non-MSMEs loans in Indonesia can be seen from the total bank loans channeled. MSMEs loans are relatively smaller compared to non-MSMEs loans. In 2013 it amounted to Rp.640,034.50 billion, despite an increase in the number of loans disbursed from the previous year, but in

percentage terms the allocation of MSMEs loans fell to 20%. (Bank Indonesia, 2014). On the other hand the number of MSMEs business units and the number of workers continues to increase.

The development of MSMEs loans in Jambi Province can be seen from the nominal value tends to increase, as well as the number of business units, labor and business turnover. In 2013 MSMEs loans only increased by 12.34% or Rp. 8.772 trillion. Furthermore, the total MSMEs Credits in Jambi Province in 2014 grew by only 6.61% and 6.58% in 2015. The number of MSMEs business units in Jambi Province during the period of 2011-2015 increased but its growth tended to decline

The allocation of the development of micro, small and medium enterprises loans provided by commercial banks and rural banks in Jambi Province during the period of 2011-2015 showed a very slow increase compared to the total Credits channeled by commercial banks and rural banks, the fact can be seen from the MSMEs credit ratio loans provided by Commercial Banks and rural bank (*Bank Perkreditan Rakyat - BPR*).

From the description above shows that there is a gap on one side of the development unit MSMEs business in Jambi province is likely to increase, the role of MSMEs is very large in employment and turnover of MSMEs, on the other hand the ratio of credit absorbed by MSMEs is very small when compared to total loans Commercial Banks and BPR. The limitation of MSMEs in accessing bank credit occurred due to several reasons, such as lack of information about potential MSMEs, high interest rates, high transaction costs per customer, and the perceived lack of MSMEs in terms, capital, technology, management, marketing so that these MSMEs are not bankable or are not eligible for credit. From the conditions or description above, the purpose of this study is to analyze the factors that influence the taking of credit to MSMEs in Jambi Province.

REVIEW OF LITERATURE

The behavior of MSMEs in accessing bank credit is inseparable from understanding the behavior of household users of credit. economic behavior of household can be seen in terms of decision making based on the role of the household in making economic decisions. In making economic decisions households can be divided into two, namely single roles and multiple roles.

In a household model that has a single role, households are only producers or consumers. While the model household with multiple roles that households act as producers and consumers. According to Nakajima (1986), household models with multiple roles are more realistic because in reality small businesses in developing countries are generally producers and consumers.

The economic model of household decision making was first introduced by Chayanov with the theory of maximizing household utility. In this theory, it is explained that household economic decisions relating to the number of family workers who carry out production activities to meet consumption needs by using the assumptions of work time and leisure (leisure). Becker (1976) also developed this model by assuming that household time allocation consisted of working time at home and relaxing.

Hiershleifer (1958) developed a household economic model used to analyze household behavior towards credit. Furthermore, Binary (1993) applied this model to analyze borrowing and saving household behavior in three villages in Sumedang district by using variables directly related to credit, savings, income and consumption.

The household economic model assumes that a household will maximize the utility of production activities, consumption and leisure activities (leisure). The utility functions are written as follows:

$$U = u (X_i, X_c, L_t, X_n)$$

Where :

- U = utility
- X_i = i factor input
- X_c = service goods and consumption
- L_t = leisure time
- X_n = other factor
- u = functional relationship

To increase the utility of the above three activities, namely from U to U*, in general households often face liquidity constraints. To increase its liquidity, the household choice is to choose credit with the assumption that before deciding to take credit, the household has considered business risk and uncertainty.

Additional credit obtained by households is intended to increase satisfaction (utility), so the above equation can be written as follows:

$$U^* = u (X_i, X_c, L_t, K, X_n)$$

where: K is the amount of credit taken.

If the credit taken has a significant effect on changes in production, the constraints on production will change. This change is caused by the inclusion of a credit variable (K) as one of the factors in production, so that the production constraint equation uses credit as follows:

$$Q = q (X_i, L_w, K)$$

Where :

- Q = output of goods and services
- X_i = I factor input
- L_w = working hours used

Credit is a financial facility that allows a person or business entity to borrow money to buy a product and repay it within a specified period of time. In the credit market there are two interacting forces namely credit supply and demand. There are some people who don't want to apply for credit because they don't need credit or because people are reluctant to credit risk (risk averse). Knowledge of this character is very important for banks to help analyze whether credit will be given or not.

Research on credit access and its determinants by households has been widely carried out. The determining factors that are reviewed are usually socio-economic factors that affect households to access credit. Li, Gan & Hu (2011), Farida (2015) included demographic factors (age, gender, education, family size), socio-economic factors (assets, income, farmland size), family member dependency ratio (family ratio), the head of the household concurrently as a worker (self-employment), family members work in an office (official worker), bank share holder, ownership of savings) and other factors such as location, distance, attitude of the head of the household towards debt (attitude toward debt), and access to other types of credit (alternative credit).

According to Kausar (2013) that the factors that influence the demand for microcredit in Pakistan, first is the interest rate variable, both access limitations and the absence of available information, the three transaction cost variables then economic

conditions, gender differences and credibility of credit providers as well as factors government.

Based on the research of Nuswantara (2012) that the existence of other lenders (the number of banks and non-banks, the type of credit scheme) also affects the demand for credit. The more number of banks and the types of loans offered will make the credit market increasingly competitive, so the credit interest rate is also expected to be competitive. Competitive credit market structure will encourage a reduction in credit interest rates in a region.

Messah & Wangai (2011) examined the factors that influence the demand for credit in small businesses in Meru Central District, Kenya concluded that the variables of age, gender, education, income, and interest rates have a significant relationship to the decision to take credit, while the number of dependents, and business attributes are not significant. According to Abdullah, Bilau, Ajagbe, & Bustani (2012), the factors that influence the choice of credit from formal or informal sources borrowed by small businesses in Oyo, Nigeria are age variables, membership composition, asset value, and education. C.O. Research Anyiro and B.N. Oriaku (2011) also examines access to micro-credit for smallholders in terms of socio-economic factors in the country of Abia, Nigeria, a case study of the Abia State, Uturu (ASUMFB) Micro Finance Bank.

Furthermore, Azriani (2014) analyzed the accessibility factors in formal financing sources which were seen from their eligibility to credit, employers' education and the ability to provide collateral. This can be seen from the education factor and the ownership of land letters that significantly affect the accessibility of non-food and household income from formal financing sources. In addition, the age and ownership position in the business that describes the ability to obtain information and networking as well as the wealth that is owned also affects the accessibility of non-food SCE entrepreneurs in formal funding sources.

RESEARCH METHODS

The sample in this study was taken from the target population, namely MSMEs in Jambi Province as many as 81,979 business units. From the total population, there will be a sample of 276 respondents in several districts/cities based on regional representation, namely Tanjung Jabung Timur Regency and Tanjung Jabung Barat Regency representing the eastern region, Bungo Regency representing the central part, Merangin Regency and Kerinci Regency representing the western region and the City Jambi as the capital of Jambi Province.

Given the extent of the regency/city area and the uneven distribution of the population, the sampling was chosen based on the most MSMEs production centers in each region. The sampling technique used was purposive sampling. From a sample of 276 respondents, there were 113 MSMEs who did not take credit and 163 business people who took MSMEs loans.

To analyze the factors that influence business actors in taking MSMEs loans, Binary Logit Regression analysis tools are used. Juanda (2009) explains to predict multiple logistic regression models with k-1 independent variables, logistic regression models are formed by stating the value of P (Y = 1 | x | = as P (x) then logit from the regression model double logistics:

$$\text{Ln}\left(\frac{P_i}{1-P_i}\right) = Z_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki} \dots\dots\dots(1)$$

and the double logistic regression model:

3 = High (more than Rp.2,000,000 / week)
 $\beta_1, \dots, \beta_{10}$ The coefficient measures changes in the probability of logistics when there is a change in one unit of X_i .

The logit model estimation is carried out by the maximum likelihood method. The coefficient interpretation for the binary logistic regression model can be done using the odds ratio value. Odd ratio can be defined as the number of times the probability of choice 1 among individuals with $x = 1$ compared between individuals with $x = 0$. The Odd ratio is as follows: (Juanda, 2009)

$$\Psi = \frac{e^{\alpha+\beta}/(1+e^{\alpha+\beta})}{1/(1+e^{\alpha+\beta})} / \frac{e^{\alpha}/(1+e^{\alpha})}{1/(1+e^{\alpha})} = e^{\beta} \dots\dots\dots(5)$$

RESULTS AND DISCUSSION

Characteristics of households for micro, small and medium enterprises

The majority of MSMEs in Jambi Province were women, namely 54.0% and the remaining 46% were male. The MSMEs who use credit are 62.33% and 37.67% who do not access credit. Of the total of business actors who obtained credit there were 39.3% of female entrepreneurs who had obtained access to credit loans from financial institutions and 60.7% were male business actors.

The distribution of MSMEs actors who took credit based on their education level was dominated by high school graduates and those with the same percentage as 45.33%, the second distribution was 16.44% of graduates who graduated (S1) from the total respondents who took credit. Judging from his educational background, there have been many who think that the education of MSMEs actor is low, namely dropouts/junior high school graduates and it turns out that perception is wrong, the high level of education is an opportunity for the government to develop small and medium micro businesses, the higher the level of education it makes it easier for businesses to receive new information and also influence decision making and can read business opportunities.

The number of MSMEs actors who had attended entrepreneurship training was 62%, and the remaining 38% MSMEs actors had never participated in entrepreneurship training, there were various types of entrepreneurship training obtained by MSMEs in Jambi Province, including training related to product processing, marketing , financial reports and accounting, how to make business licenses, AMT, and management of the training aimed at improving the ability of MSMEs actors.

In general, most MSMEs actors have side jobs (66.67%) and the remaining 33.33% do not have a side job. The age of MSMEs actors in Jambi Province in this study were mostly between 41 years and 50 years old, reaching 35.33% of the total MSMEs. Micro, small and medium entrepreneurs who are less than 30 have 51 respondents consisting of 62.7% of respondents who took credit and respondents who did not take MSMEs credit (37.3%). Furthermore, the average working hours per week for MSMEs actors in Jambi Province are 44.75 hours per week. The average working hours are above the working hours set by the 2003 Manpower Act.

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This study uses logit regression analysis to analyze the factors that influence the taking of MSMEs credit in micro, small and medium enterprises in Jambi Province. As the dependent variable the value of the category used is denoted as $Y = 1$ stating that the business actor who takes the credit and $Y = 0$ states the event that the business actor

does not take credit. The independent variable is used to look at the factors that influence business actors in taking credit, namely based on household characteristics, individual characteristics and business characteristics. The factors of household characteristics include household expenses, working partners, and side jobs. Individual characteristics are: age and level of education. While the business characteristics consist of: working hours, number of workers, length of business and ownership of a bank account.

To test whether all explanatory variables jointly influence the dependent variable, a likelihood ratio (LR) is used. The LR statistical value follows the chi square distribution (χ^2) with the degree of freedom (df) as many explanatory variables not including constants. If the value of chi square (χ^2) is greater than the critical value, then all explanatory variables together affect the dependent variable. The hypothesis for assessing fit models is:

Ho: The model that is hypothesized to fit from the data

Ha: The model hypothesized is not fit from the data

Decision rejects Ho if $\chi^2 > \chi^2_{(\alpha, 1-p-1)}$. From the results of the Omnibus Test of Model Coefficients, the Chi Square value was 128,293 degree of freedom (df) = 15 with a significant probability (p) = 0,000. It can be concluded that the independent variables in the model jointly influence business actors in taking MSME credits or not taking credit.

Table 1 shows that the statistical value of Hosmer and Lemeshow's Goodness of Fit is 6,110 with a significant probability of 0.635 which is far above 0.5. Thus it can be concluded that the model is acceptable.

Table 1. Test of overall fit models for MSMEs credit taking models

	Chi-square	DF	Sig.
Omnibus Test of Model Coefficients	128,293	15	.000
Hosmer and Lemeshow Test	6,110	8	.635

The 2x2 classification table in Table.2 shows how well the model classifies cases into two groups, both for businesses that take MSMEs credits and for businesses that do not take credit. The overall classification accuracy is 81,2%. It can be concluded that the accuracy of the model in predicting the probability of businesses taking MSMEs credits is relatively greater compared to businesses that do not take MSMEs credits.

Table 2. 2x2 classification of MSMEs credit taking models in Jambi Province

	Observed	Predicted		Percentage Correct
		No	Yes	
Taking credit	No	79	34	69,9
	Yes	18	145	89,0
Overall Percentage				81,2

Parameter estimation and partial test in binary logit model for factors that influence business actors in obtaining MSMEs credit are presented in Table 3.

Side jobs (DPS)

The value of the coefficient in the model for the side job variable shows a significant effect. Respondents who have side jobs have the opportunity to take MSMEs credit of $e^{1,173} = 3,233$ times greater than respondents who do not have side jobs. In addition to carrying out its business activities, several MSMEs have side jobs such as: Civil Servants/teachers, honorary workers, informal workers, farmers, trade, gardening,

laborers, and security guards. In some types of businesses such as batik, there are some respondents who have jobs as civil servants. In general, they are business owners who employ workers in their batik business. Business people have a flexible time in conducting business activities, so that some of them have free time to increase income through side jobs.

Table 3. Variables in the equation

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
DPS(1)	1,173	,353	11,082	1	,001	3,233	1,620	6,452
JTK	-,003	,118	,000	1	,983	,997	,791	1,258
JKR			5,306	2	,070			
JKR(1)	,407	,482	,714	1	,398	1,502	,584	3,862
JKR(2)	,991	,443	4,991	1	,025	2,693	1,129	6,422
DPB(1)	-,754	,364	4,289	1	,038	,470	,230	,960
DGE(1)	-,874	,367	5,662	1	,017	,417	,203	,857
EDU			7,434	3	,059			
EDU(1)	,208	,554	,141	1	,708	1,231	,416	3,645
EDU(2)	1,085	,503	4,660	1	,031	2,960	1,105	7,927
EDU(3)	1,101	,549	4,025	1	,045	3,006	1,026	8,811
TIME			9,164	2	,010			
TIME(1)	1,080	,391	7,627	1	,006	2,943	1,368	6,333
TIME(2)	1,106	,457	5,873	1	,015	3,023	1,236	7,398
AGE	,016	,016	,998	1	,318	1,017	,984	1,050
CONS			14,223	2	,001			
CONS(1)	,557	,430	1,682	1	,195	1,746	,752	4,055
CONS(2)	1,975	,543	13,239	1	,000	7,208	2,487	20,888
DREK(1)	2,267	,468	23,496	1	,000	9,649	3,859	24,131
Constant	-4,655	1,229	14,341	1	,000	,010		

Number of workers (JTK)

In general, the increase in business activities will be accompanied by an increase in the number of labor and capital. The greater the activity of a business, the greater the need for capital and labor. But the coefficient value for the number of workers does not show significant. This means that there is no difference in the probability of businesses taking credit with those who do not take credit in the workforce. In MSMEs households there are special characteristics where business owners as well as workers.

Working hours (JKR)

In terms of working hours (JKR1), there is no difference in the probability of taking credit between business actors who have medium working hours (25-45 hours/week) compared to those who have low working hours (<25 hours/week). However, the odds ratio for variables (JKR2) is 2,693. It means that the tendency of MSMEs who have high working hours above 45 hours per week has a 2,693 times greater chance of taking credit compared to business people who have low working hours (less than 20 hour). The higher a person's working hours, the higher the level of productivity. High productivity will affect the income received.

Working partners (DPB)

The value of Odd ratio is 0.470 in the working pair variable indicating the tendency of MSMEs actors who have working partners have the opportunity to take credit by 0.470 times compared to respondents who have partners who do not work. This means that the probability of making credit decisions for MSMEs actors who have

working partners is smaller than MSMEs actors who have partners who do not work. In general, businesses that have a working partner, they will tend to use their own capital first in business activities.

Gender (DGE)

In this study the value for the female sex variable = 1, and male = 0. The result of the odd ratio can be interpreted as the tendency of female entrepreneurs in taking credit is 0.417 times compared to men. This means that the chances of female entrepreneurs in taking credit are lower than men. The low chance of women in taking credit is because women lack assets that can be used as collateral to get formal credit. In addition, ownership of assets in married women is usually controlled and in the name of the husband as the head of the family. This study is in line with what has been done by Mesah and Wangai (2013), Ololade (2013) and Nkuah, et, al (2013) where business owners of male sex have greater accessibility than female owners.

Age (AGE)

The age variable is not significant, meaning that there is no difference between business actors who take credit with businesses that do not take credit based on their age level. Age is not a consideration from the credit provider, as long as the business actor's age is still in the productive age range. However, age is a very important thing in describing the maturity of a person's productivity level.

Education level (EDU)

In the context of education (the basic category is a business actor graduating from elementary school). There is no difference between elementary school and junior high school education to take loans. But there is a difference between high school and undergraduate. The odds ratio shows that business actors with high school education have a probability of 2,960 times higher than those with elementary education. This probability is even higher for business people with undergraduate education, with a probability ratio (odds ratio) of 3,006.

Education is an important factor in accessing bank credit, because to apply for credit at formal financing sources there are procedures and credit contracts that must be understood by business actors. This is in line with research conducted by Pandula (2011) which states that education is an important factor in accessing credit, because educated business actors have more ability in making business plans and financial information as well as building relationships with financial institutions.

Long established business variables

The long established business variable is divided into three groups with the basic categories of business actors having a business duration of less than 10 years. The results of the study showed that there were significant differences in the decisions of business people in taking credit based on the business years. Opportunities for businesses to take credit will be greater along with the increase in business years. The value of the odds ratio of 2,943 can be interpreted as business actors who have 10-20 years of business having a greater chance of taking credit compared to business actors who have a business duration of less than 10 years. In the old category of business years over 20 years also shows a greater opportunity that is 3.023 times compared to businesses that are less than 10 years. Most business players who are optimistic that they can market their products, they will propose capital loans to banking institutions for the development of their businesses. This research is in line with Musamali and Tarus (2013) which states that the duration of business influences the ability of MSMEs to access and participate in financial institutions.

Account ownership (DREK)

The ownership of the business actor's account at the Bank has a significant effect on the factor of taking credit. Business actors who have a bank account have an opportunity of 9,649 times for decisions to take credit compared to business actors that do not have accounts. In general, business actors who have accounts at the Bank will get quick and complete access to information compared to businesses that do not have bank accounts. Relationship factors affect the ability of small businesses to access bank credit.

Household expenditure (CONS)

The higher household consumption needs, the behavior of MSME actors tends to take credit. Household expenditure is divided into three categories (with the basic category of low household expenditure <Rp.1,000,000). There is no difference between low and medium household expenditure in taking loans. However, there is a difference in high household expenditure, with an odds ratio of 7,208. This means that MSMEs actors with high household expenditures have a probability of 7,208 times greater than the MSMEs actors of low household expenditure in taking loans. In the household economy of micro, small and medium enterprises, business actors have a dual role, namely being able to become consumers as well as producers. As consumers there are times when they need funds to meet other needs such as education and health expenses, while the income they earn is not enough. On the other hand they need capital to sustain business activities. Therefore, to fulfill capital adequacy, the business actors will usually propose capital loans in the form of loans.

Economic analysis

One problem that is still often faced by MSMEs is the capital problem which is a critical factor for micro, small and medium enterprises, especially for the fulfillment of working capital and investment capital in business development. Most micro, small and medium enterprises are unable to get credit from banks because they do not meet the requirements to be eligible for credit. Capital is one of the inputs used in the production process to produce a certain amount of output. In starting a business, MSMEs actors generally obtain capital originating from various sources such as personal savings, assistance from relatives or from informal sources in order to fund production activities. withdrawal of credit from banks.

There are still many micro, small and medium enterprises entrepreneurs who have not obtained credit access from the banking sector. The low access to credit for banks is not only because these MSMEs are not yet bankable or do not have sufficient collateral, but there are other factors that also affect business people in making credit decisions.

The decision to take credit by business actors is inseparable from the influence of individual characteristics, household characteristics and business characteristics of the business actors themselves. Therefore the empowerment of micro, small and medium enterprises needs to be improved through improving the quality of human resources. Human resources is one of the most important factors that determine the success or failure of the objectives of a business activity. Unprofessional MSMEs culture will be an obstacle in improving the quality of human resources, whereas reliable and quality human resources can help micro, small and medium enterprises in absorbing market knowledge and needs and increasing the confidence of banks or other financial institutions in providing credit for working capital.

Some of the characteristics inherent in most MSMEs, such as the low quality of human resources working in the MSMEs sector, both in terms of formal education,

knowledge and skill levels will affect business management, low labor productivity, low levels of salaries and wages, employing female workers more than men and the quality of the goods produced is less competitive. Therefore there is a need to continue to improve the quality of human resources by emphasizing individual characteristics and household characteristics of micro, small and medium enterprises.

The results of this study also support from several studies that have been carried out by Pandula (2011); Nguyen and Luu (2013) who recommend that the characteristics of business owners become one of the determinants in making credit decisions in small businesses. Furthermore Oriakhi and Onemolease (2012) state that demographic factors are one of the factors that determine a person's participation in taking credit. Another study that supports the results of this study was also conducted by Machira, Njati, Thiane and Huka (2014) in their study of accessibility of female SME entrepreneurs in Kenya.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Most of the MSMEs actors are women. The average education level of MSMEs actors are graduated from high school, with the average age being in productive age.

Factors that influence the taking of credit to business actors are side jobs, working hours, working partners, sex, education, length of business, account ownership and household expenditure variables. As for the age variable, and the number of workers is not significant for the decision to take credits in Jambi Province. The behavior of taking credit is not only determined by the characteristics of the business, but also determined by the individual characteristics and characteristics of the household of MSMEs actors.

Recommendations

Efforts to increase the participation of business people in credit can be done by building the character of MSMEs actors (household characteristics and individual characteristics) through improving the household economy. Human resources for business people need to be improved through training and guidance for MSMEs both in terms of management and business as well as information about credit access and the market periodically.

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