Effect of Macroeconomic Factors on The Small-Medium Enterprises Loans

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ABSTRACT

Small-medium enterprises (SMEs) are the main pillar of the Indonesian economy. Based on 2016's Economic Census, most businesses in Indonesia are SMEs, while SMEs absorb the majority of the workforce. The empowerment of SMEs is one way to improve the economy. To empower the SMEs sector, the Indonesian government launched the *Kredit Usaha Rakyat* (KUR) since 2007. The lasts policy is the provision of the mild interest rate for KUR since 2016. The hope is that with a mild interest rate, SMEs can get affordable financing access so they can be the driving force of the economy. However, credit demand is not only influenced by interest rate but other macroeconomic factors such as Gross Domestic Product and inflation. Also, this study will look at how development disparities between the West Indonesia Region and East Indonesia Region affect credit demand. This research is intended to see the effect of macroeconomic factors on Small-medium enterprises loans. Source of data is taken from Indonesia Central Bureau of Statistics. This study uses panel data by the applying the 2011-2018 time-series data and 33 provinces cross-section data are used to investigate the relationship of SMEs' Loans with these macroeconomic factors. The result show that Interest Rate, GRDP, and Inflation, effect on SMEs Loans in a respectively different manner. However, the development disparities between West Indonesia Region and East Indonesia Region has no significant effect on SMEs' loans. The implication of the study concludes that macroeconomic activities are important indicators not only the interest rate for SME's loans. So, the government should not only focus on interest rate policy and funding facilities for SME's but also other macroeconomic factors.

Keyword: Macroeconomic Factors, SMEs' Loan, *Kredit Usaha Rakyat* (KUR), Panel Data.

ABSTRAK

Usaha Mikro Kecil Menengah (UMKM) adalah pilar utama dalam perekonomian Indonesia. Berdasarkan Sensus Ekonomi 2016, sebagian besar bisnis di Indonesia adalah UMKM, sementara UMKM menyerap mayoritas tenaga kerja. Pemberdayaan UMKM adalah salah satu cara untuk meningkatkan perekonomian. Dalam upaya memberdayakan sektor UMKM, pemerintah Indonesia meluncurkan Kredit *Usaha Rakyat (KUR) sejak 2007. Kebijakan terakhir adalah pemberian suku bunga ringan untuk KUR sejak 2016. Harapannya adalah dengan suku bunga ringan, UMKM bisa terjangkau akses pembiayaan sehingga mereka dapat menjadi kekuatan pendorong perekonomian. Namun, permintaan kredit tidak hanya dipengaruhi oleh Suku Bunga tetapi faktor makro ekonomi lainnya seperti Produk Domestik Bruto, dan Inflasi. Selain itu, pada penelitian ini juga akan melihat bagaimana ketimpangan pembangunan antara Kawasan Indonesia Barat dan Kawasan Indonesia Timur mempengaruhi permintaan kredit. Penelitian ini dimaksudkan untuk melihat pengaruh faktor ekonomi makro terhadap pinjaman usaha kecil menengah. Sumber data diambil dari Badan Pusat Statistik Indonesia. Penelitian ini menggunakan data panel dengan mengaplikasikan data deret waktu 2011-2018 dan 33*

data provinsi digunakan untuk menyelidiki hubungan Pinjaman UMKM dengan faktor makroekonomi tersebut. Hasilnya menunjukkan bahwa suku bunga, PDRB dan inflasi, masing-masing berpengaruh terhadap Kredit UMKM. Namun demikian, ketimpangan pembangunan antara Kawasan Indonesia Barat dan Kawasan Indonesia Timur tidak berpengaruh signifikan terhadap kredit UMKM. Implikasi dari studi tersebut, menyimpulkan bahwa aktivitas ekonomi makro adalah indikator penting tidak hanya tingkat bunga bagi pinjaman UMKM. Jadi, selayaknya pemerintah tidak hanya harus fokus pada kebijakan suku bunga dan fasilitas pendanaan kepada UMKM tetapi juga pada faktor ekonomi makro lainnya.

***Kata Kunci**: Faktor Makro Ekonomi, Pinjaman UMKM, Kredit Usaha Rakyat (KUR), Data Panel.*

INTRODUCTION

Referring to the 2016 economic census, the current Indonesian economy is dominated by small-medium enterprises (SMEs) which also absorb the 76% of the workforce. On the other hand, bank loans are channeled mostly to the non-SMEs sector. Therefore at this time can be said that small-medium enterprises are more labor-intensive. Banking access for small-medium enterprises is considered difficult because there are several obstacles including limited collateral, small ability to pay (with normal interest rate), and limited market share.

As a business sector that absorbs a lot of employment, small-medium enterprises are considered to need government support. The contribution of the SMEs sector to the GDP in 2013 was 60% and continues to increase. According to Law No. 20/2008 concerning Micro, Small, and Medium Enterprises, Article No 8 access funding is intended to expand the source of funding and facilitate micro, small, medium enterprises to be able to access bank loans. There are many policies related to efforts to open small-medium enterprises access to banks, starting in 2007 the government released Kredit Usaha Rakyat (KUR). The definition of KUR is a loan given by banks to SMEs that is feasible but not yet bankable. The intention is that the business has a good business prospect and can repay the loan. (http://kur.ekon.go.id).

KUR has experienced changes in the financing model since 2015. The main focus of the new model is a decrease in interest rate. In 2016 the KUR's interest rate became a single digit at 9% and even in 2018, it was 7%. The reduction in interest rate is government policy to facilitate banking access to SMEs. The ultimate goal is that SMEs can more easily access financing from banks and SMEs will increasingly develop. Then it will simultaneously improve the economy. Ramelda et al. (2017) have researched the relationship of interest rate and gross regional domestic product to bank lending. The result shows that the interest rate has a negative relationship on lending, meaning that when the interest rate is lowered, the demand for credit increases. On the other hand, Zandi (2019) write about the factors that influence the demand for bank credit. The result is the gross regional domestic product and inflation has a relationship on loan demand.

Kusuma et al (2018) conducted another study on the macroeconomic relationship with loans. The focus of research is on the effect of Gross Regional Domestic Product (PDRB) per capita and real interest rates on the demand for consumer credit at commercial banks in Bali Province. The results obtained are that the GDP per capita has a positive and significant effect on the demand for a consumer loan at Commercial Banks in Bali Province. On the other hand, real interest rates have a negative and significant impact on the demand for a consumer loan in Bali Province. Similar results were also obtained from research conducted by Hismendi (2015), Saparunddin (2015), Sari et al (2016), Tandris (2014) and Towonusa (2016) which stated that loans were influenced by macroeconomic variables.

The disparity of economic development between regions is a common thing that happens in economic activity. This imbalance is basically caused by differences in natural resources or geographical conditions Sjafrizal (2008). Based on Presidential Decrees No. 2/2015 concerning the

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Medium-Term Development Plan, the concentration of development is in the Western Indonesia Region (Sumatra, Java, and Bali) which controls 80 percent of GDP. The disparity in development economic shows an imbalance caused by differences in resources or geographical differences. So with the difference in resources, the demand for credit will be higher in the western region of Indonesia than in eastern Indonesia because it has better resources and geographical potential.

Based on several studies that have been previously conducted by Zandi et al (2019), Pena (2017), Kusuma et al (2018), Ramelda et al (2017), Hismendi (2015), Siwi et al (2019), Rompas et al. al (2018), and Towonusa (2016), it can be concluded that the demand for credit is not only influenced by interest rate but there are several macroeconomic factors. So, macroeconomic factors influence credit demand. Now the question is which macroeconomic factors have an influence on the demand for credit for SMEs.

METHOD

This research uses quantitative and qualitative data. Quantitative data is a type of data that can be measured or calculated directly as a variable number. Qualitative data is data from verbal word explanations that cannot be analyzed in the form of numbers. This study uses panel data regression analysis. The data used in this study are secondary data obtained from relevant sources including Bank Indonesia, Coordinating Ministry for Economic Affairs of the Republic of Indonesia, The Financial Services Authority, and The Central Bureau of Statistics. Thus, quantitative and qualitative study techniques are used to analyze the results of the factor affecting SMEs Loans

To assess the macroeconomic factor impact on the small-medium enterprise loans, the following model is used.

$$LnCrSMEs_{it} = \propto + \beta_1 IR_{it} + \beta_2 LnGRDP_{it} + \beta_3 Inf_{it} + \beta_4 Disp_{it} + \mu_{it}$$

LnCr SMEs	:	SMEs loans (in ln)
IR	:	Interest rate
LnGRDP	:	Gross Regional Domestic Product (in ln)
Inf	:	Inflation
Disp	:	Dummy variable of development disparities
		D = 1 -> West Indonesia Region
		D = 0 -> East Indonesia Region
α	:	Intercept
β	:	Regression coefficient/slope
i	:	Cross-section units
t	:	Time-series units
μ	:	Error term

The variables of SMEs loans and GRDP are using ln functional model because the SMEs and GRDP data are considered to have large variations and may not be normally distributed.

RESULTS AND DISCUSSION

The data used in this study are time-series data from 2011 until 2018 on the variable loan to SMEs in 33 provinces in Indonesia. During this period, the loan is continuing to increase. In this study, a panel data regression was carried out on macroeconomic variables such as interest rate, GRDP, inflation, and development disparities to find out how these variables influence the loan to SMEs.

On the model of panel data regression, the first step is to determine the model that will be used to estimate. This study uses the Eviews 9 to do the analysis. The initial step in the analysis is to choose the right method between common effect and random effect (Iqbal 2015). The process of selecting the right method only uses the Lagrange Multiplier test. Because based on calculations using Eviews 9, the regression results that appear are only the common effects and random effects method. While the regression results with the fixed effect method gave a "near singular matrix"

result. Therefore the selection of the right method is only done on the common effects and random effects methods.

Table 1. Result Regression

Variabel	Common Effect			Random Effect		
	Koef	t-Stat	t	Koef	t-Stat	T
C	0.3994	1.0484	0.2954	-0.7397	-0.7986	0.4253
IR	-0.0429	-4.2181	0.0000	-0.0411	-7.6644	0.0000
LnGRDP	0.877	44.2477	0.0000	0.9341	18.8532	0.0000
Inf	0.0117	1.2047	0.2294	0.0140	3.0505	0.0025
Disp	-0.0184	-0.4022	0.6879	-0.0941	-0.7802	0.4360
R^2			0.9154			0.7708
Adj R^2			0.9141			0.7673

Source: Authors's calculation

To determine which method is the most appropriate between common effect and random effect the Lagrange multiplier test is used.

Table 2. Result Lagrange Multiplier

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	563.2733	1.090193	564.3635
	(0.0000)	(0.2964)	(0.0000)

Source: Authors's calculation

In calculating the Lagrange multiplier test, the p-value in this study uses the Breusch-Pagan method which shows the value of 0.0000. Because the value is less than 0.05, it can be concluded that the best method used is random effects. Based on Table 1, the result of the random effects regression can be made a regression equation as follow:

$$LnCrSMEs_{it} = -0.7397 - 0.0411IR_{it} + 0.9341LnGRDP_{it} + 0.0139Inf_{it} - 0.0941Disp_{it} + \mu_{it}$$

From these data, it can be concluded that these four variables affect SME's credit simultaneously. Partially, three independent variables have a significant effect on the dependent variable and there is one variable that does not affect the dependent variable namely the disparity variable. Interest rate has a negative and significant effect while the GRDP and inflation have positive and significant.

The classic assumption test results of the regression equation illustrate that of the four test stages namely normality, multicollinearity, heteroscedasticity, and autocorrelation (Ansofino 2016 & Duli 2019). The regression equation passes the normality, multicollinearity, and heteroscedasticity tests but does not pass the Autocorrelation test. Nevertheless, the approach in the panel data regression is closer to cross-section data (short panel). In this study, cross-section data are more dominant than time-series data, so that the results of the autocorrelation test can be ruled out because the autocorrelation test looks at the relationship of the data to the previous period's data.

The Macroeconomic Factor Impact on The Small-medium Enterprise Loan In Indonesia
Based on Table 1 the results of the panel data regression model analysis using the random effects method were obtained:

The sign of each independent variable on credit to SMEs shows signs and positive (+) and negative (-). If it has a positive sign (+) it means that when there is an addition to each independent variable, it can increase the dependent variable. conversely, if it has a negative sign it means that

when there is an addition to the independent variable, it will decrease the value of the dependent variable.

All independent variables significantly influence the variable dependent with α = 5 percent (0,05). R^2 = 0,77 explained that the independent variables in this model were able to explain credit to SMEs in 33 Provinces in Indonesia from 2011 to 2018 amounting to 77,08 percent and the rest can be explained by other variables outside the research variable.

In this study, it was found that the interest rate variable had a significant negative effect on SMEs in 33 provinces in Indonesia in 2011-2018. The coefficient value of the variable interest rate is -0.041 which means that with an increase in the loans rate of 1%, it will affect the decline of credit to SMEs by 0.041 percent (Ceteris Paribus). This study is in line with previous studies conducted by Ramelda (2017), Kusuma (2018), Hismendi (2015) and Siwi (2019).

In this study, it was found that the GRDP variable had a significant positive effect on credit to SMEs in 33 provinces in Indonesia in 2011-2018. The coefficient value of the GRDP variable is 0.93 meaning that every 1 percent increase from the GRDP will affect the increase in loans to SMEs by 0.93 percent (Ceteris Paribus). This study is in line with previous studies conducted by Zandi (2019), Kusuma (2018), Hismendi (2015) and Ramelda (2017).

On the other hand, this study provides results that the inflation variable had a positive and significant effect on the credit to SMEs in 33 provinces in Indonesia in 2011-2018. The coefficient value of the inflation variable is 0.04 meaning that every 1 percent increase from the inflation will affect the increase in loans to SMEs by 0.04 percent (ceteris paribus). This study is in line with previous studies conducted by Hismendi (2015) and Towonusa (2016).

The last variable studied was found that the variable disparity had a negative but not significant effect on the credit to SMEs in 33 provinces in Indonesia in 2011-2018. The disparity variable used a proxy the concentration of development in Indonesia, which is divided into two regions, namely West Indonesia and East Indonesia, which is not as expected, which means there is no difference in credit demand between the two regions. The coefficient value of the disparity variable is -0,094 and has no meaning or cannot be interpreted. The insignificance of this variable shows that there are no significant differences between the regions of West Indonesia and East Indonesia in terms of loans to SMEs. This means that there are no significant disparities in loans to SMEs.

Table 3 shows the results of the influence of each independent variable on the dependent variable. the variable that has the greatest influence in increasing credit to SMEs is the GRDP variable, in which the coefficient value is 0.9341 and the prob. value is 0.0000.

Table 3. Effect of Independent Variables on Dependent Variables

Independent Variable	Coefficient	Prob	Most Dominant	Significance
IR	-0.0411	0.0000		√
GRDP	0.9341	0.0000	√	√
Inflation	0.0140	0.0025		√
Disparity	-0.0941	0.4360		-

Source: Authors's calculation

The results of this study illustrate that macroeconomic factors can affect lending to SME's. The biggest macroeconomic factor that influences loans to SME's is GRDP. Government efforts in empowering SME's by facilitating SME's financing through loans with low interest rates have, in fact the effect of GRDP is greater than interest rates. So the government should not only focus on interest rate policies and financing facilities for MSMEs but also other macroeconomic factors.

CONCLUSIONS
Three of the four independent variables have a significant effect on the dependent variable. The strongest influence on increasing credit for SMEs is GRDP. Good economic conditions tend to increase people's purchasing power so that demand for goods will increase which will indirectly increase demand for credit. Interest rates also have a significant impact on credit, however to

change interest rates is not easy unless the interest rate to SMEs is reduced by government policy. On the other hand, inflation also has a positive and significant impact on credit. however, an increase in credit due to inflation will actually only increase credit in nominal terms but not necessarily increase in output of goods that can be obtained from the credit. The development disparity variable apparently did not have a significant effect on credit to SMEs. This condition illustrates that income inequality does not affect loans, loans for each region is more influenced by the ability of the region itself

The implication of this research is that the macro economy has an influence on loans to SME's. The biggest influence is from the GRDP of each province then followed by variable interest rates. A comparison between all independent variables illustrates that the GRDP is more influential on credit to SME's. This is considered reasonable because the policy incentives from the government to boost loans to SME's are considered difficult to develop if national and regional economic fundamentals are not qualified. The lack of purchasing power will make SME's entrepreneurs rethink to apply for credit and the banks will rethink to channel if the entrepreneurs are not supported by adequate sources of payment.

In the event that the government aims to empower the SME's sector, the government seeks to provide access to funding to the SME's sector in the form of subsidized loan interest rates through the KUR program. However, the results of the study showed that the influence of loan interest rates was not as large as the GRDP. So the government is expected to further boost other variables besides interest rates such as assistance to SME's both in production and marketing. Because the limitations of SME's could be in the production and marketing processes not in terms of funding.

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