THE EFFECT OF FINANCIAL INCLUSION TO MICRO SMALL AND MEDIUM ENTERPRISES CREDIT IN INDONESIA

by Astiwi Indriani

THE EFFECT OF FINANCIAL INCLUSION TO MICRO SMALL AND MEDIUM ENTERPRISES CREDIT IN INDONESIA

Linati Haida Alimi, Astiwi Indriani[1]

Management, Faculty of Economics and Business, Diponegoro University
astiwi.indriani84@gmail.com

ABSTRACT

Micro, small and medium enterprises (MSMEs) are very conducive to the economic development of a nation, including Indonesia where the number of MSMEs continues to increase from year to year. However, its growth is hampered by the difficulty of access to capital that causes less credit distribution to MSMEs. To minimize this, the Indonesian government has issued an inclusive financial program to maximize the use of formal financial products and services, particularly banking. The aims of this study was to determine the effect of geographic branch penetration (GBP), demographic branch penetration (DBP), credit accounts per capita (CAC) and deposit accounts per capita (DAC) to MSMEs credit in Indonesia.The research sample is Indonesian territory and used total sampling method for covering data in all area, which is 34 provinces in 2012-2016. Data analysis using multiple linear regression analysis.The results of this study indicate that geographic branch penetration has positive and insignificant effect on MSMEs credit, demographic branch penetration has a negative and significant effect to MSMEs credit, while credit and DPK accounts per capita have positive and significant effect to MSMEs credit.

Keywords: Financial Inclusion, Geographic Branch Penetration, Demographic Branch Penetration, Credit Accounts Per Capita, Deposit Accounts Per Capita, Banking

BACKGROUND OF STUDY

Micro, small and medium enterprises (MSMEs) are very conducive to the economic development of a nation, including Indonesia, where the number of MSMEs continues to increase from year to year. This of course can not be separated from the supporting factors, one credit MSMEs as capital holder (Ayuba&Zubairu, 2015). MSME credit from year to year has inconsistency in its growth which is still relatively low in the middle of the factors that should be able to improve credit distribution of MSME to be higher, such as an increase in the number of bank offices (branches and ATM); credit accounts and deposit accounts.

As the number of MSME credit continues to increase, credit distribution of MSMEs is not maximum because it is still uneven and unequal between regions with other regions. This is supported by the lack of MSME's access to financial services (Nu & Le, 2012), which also affects the inclusiveness of banking and credit of MSMEs that are not maximum. In order to minimize this, the government of Indonesian has issued an inclusive financial program in order to maximize the use of formal financial products and services, particularly banking. This financial inclusiveness is viewed from the dimensions of access, usage and quality.

---

[1]*Corresponding author*

The first dimension is the dimension of the access, this dimension is a measure of the ability of the use of formal financial services in terms of cost or affordability of financial services in physical form such automatic teller machines, bank offices and others. This access dimension is distinguished by geographic and demographic. Geographic indicators consist of Geographic Branch Penetration and Geographic ATM Penetration, and demographic indicators consist of Demographic Branch Penentration and Demographic ATM Penetration (Financial Sector Operations and Policy, World Bank, 2004).

The second dimension is the usage dimension, in which this dimension measures the use of services and financial products such as regularity, frequency and duration of use. Indicators on usage dimensions are Credit Account per Capita and Deposits Account per Capita. This dimension reflects the use of banking services by the community, the higher the calculation results, the more people who use banking services (World Bank, 2004).

The third dimension is the quality dimension, used to determine whether the availability of products, attributes and financial services meets the needs of the customer, which can be done by measuring the level of financial literacy or financial knowledge (Bank Indonesia 2017).

Financial inclusion in Indonesia is interesting thing to investigate because of massive inclusive financial index in Indonesia only 36% lower than Malaysia's with 81% (World Bank, 2014), although there is increasing 67.82% (OJK, 2016), IFI value in Indonesia is still low compared to other countries. This is also evident in the financial inclusion index in every province in Indonesia. The province of Jakarta became the province with the largest IFI level in Indonesia namely 78.18% while the other provinces have index which varies with the range of 58% to 76% (OJK, 2016). The low value of IFI in Indonesia, of course, the optimization of credit distribution will also be hampered, the public difficulty accessing banking financial products or other financial institutions if there is no effort to increase financial inclusion by the government.

In addition to the credit distribution of MSEMs is not evently distributed and and still relatively low, the differences of research results that have been made also become the background of this research. Because some previous studies on financial inclusion and credit have resulted in inconsistent findings (e.g. Ghosh, 2011; Togba, 2012; Quoc, 2012; Li et al., 2013; Rahman & Widyarti; 2017) so that further testing needs to be done to know the consistency if applied on a different environmental conditions.

This aims of this study was to determine the effect of several indicators of financial inclusion namely geographic penetration (Geographic Branch Penetration), demographic penetration (Demographic Branch Penetration), Credit Accounts per Capita and Deposits Account per Capita against total MSMEs credit in Indonesia.

LITERATURE REVIEW

Credit of Micro Small and Medium Enterprises, according to the world bank (2007), as microcredit which is a community borrowed fund used to support entrepreneurial development and reduce poverty. The purpose of lending to MSMEs is to facilitate access to credit of financial institutions and become a source of funding for MSMEs; able to expand the network and multiply financial institutions so that MSMEs is easy to access; MSMEs get the right service, fast, cheap and not discriminative; ease of service or other products for MSMEs (Act number 20 of 2008). MSME lending will be able to run well, if it has formed an inclusive financial. Inclusive Finance is an effort with the aim of minimizing and eliminating barriers to access by the public to products and services provided by financial institutions (Bank Indonesia 2014). The Reserve Bank of India then defines financial inclusion as a process of ensuring affordability of access to services and

financial products required by all communities and vulnerable groups such as low-income groups, at affordable costs, in a fair and transparent way by institutional players.

Inclusive financial improvements have been made in many previous studies on methods. One of them, Sharma (2012), has developed a method of calculating the Index Financial Inclusion (IFI) in order to measures financial inclusion between countries, inter-provinces within a period of time, consisting of three dimensions of access, usage and quality dimensions.

The correlation between access dimensions (Geographic Penetration and Demographic Penetration) and usage dimensions (Credit Account per Capita and Deposits Account Per Capita) and MSMEs Credit uses two theories: optimal industry location theory and modern financial intermediary theory. In the Optimal Industrial Location Theory (Losch, 1954), it is said that the determination of the location should be based on the company's orientation to profit, this is because when the location with the best or greatest profit will appear along with the lowest cost, he also introduces the demand variable as one of the important variables in the determination of the location in terms of sales capabilities, Losch also attach importance to easier access that will be obtained by buyers both in terms of distance and transportation costs that also determine the demand and sales. If the theory of optimal industrial location is linked to the banking sector, then when branch offices or ATMs get closer to the market and businessman (consumers) it will facilitate access and increase demand while simultaneously increasing the use of services and products, including MSME loans.

In the theory of modern financial intermediaries (Andries, 2009), previous theories that reveal that financial intermediaries sell back their assets, in this case the assets in question are third party funds, have been broken. On the other hand, Andries reveals that financial intermediaries create new assets that they market, in this case the intended assets are credits that will become accounts receivable. In other words, banking, as one of the financial intermediary institutions, where the product is ultimately a loan given to credit customers and the main input is deposits (funds) obtained from depositors, therefore, the greater the funds collected from the public (depositors) the more funds will be channeled to the community (creditors / customers of credit).

The Influence of Geographic Branch Penetration to MSMEs Credit

Geographic Branch Penetration is one of the indicators of the access dimensions of financial inclusion, where the measurement looks at the number of bank branch offices per 1.000 KM^2. This indicator reflects the closer distance to the nearest physical outlet of the bank (branch office) and thus makes it easier to access geographically, in other words, people can easily access banking services and products, including MSME credit. Increased ease of access will also be followed by an increase in MSMEs credit customers who will also increase the number of MSME loans disbursed.

This is supported by the theory of optimal industrial location (Losch, 1954) which says that the further the market, the more consumers will bemore reluctant to buy or use the product or service, in other words, the easier the public access to the company outlet, the higher demand for the product / services that sold. So, if the closer bank branch office with the community, the number of people who can access the MSMEs credit will also increase and the last will the number of MSMES credit. In addition, previous studies have shown a positive relationship between Geographic Branch Penetration and the number of MSEMs credits distributed, those studies conducted by Beck, Demirguc-Kunt, & Martinez Peria (2008), Togba (2012), Sharma (2016), Allen, Demirgüç-Kunt, Klapper, & Martinez-Peria, (2012), Rahman&Widyarti, (2017). So from the description of the relationship, it can be formulated hypothesis as follows

3

H1: Geographic Branch Penetration has a positive relationship to MSMEs credit in Indonesia

The Influence of Demographic Branch Penetration to MSMEs Credit

Demographic Branch Penetration is one of the measurement indicators of access dimensions of financial inclusion, where this indicator is measured by looking at the number of branch offices of a bank per 100.000 adult population. This indicator reflects the average number of people served by each branch outlet, therefore higher values imply fewer clients per branch, or in other words,the access of a bank get easier. With the ease of access, the potential of the people to obtain services and banking products will be greater, including MSMEs credit. With the large number of people and businessman who can access MSMEs credit, it will increase MSME credit customers, which will also lead to an increase in the number of MSME loans disbursed.

This is supported by research by Sharma (2016) and Quoc (2012) which said that there is a positive relationship between Demographic Branch Penetration and MSME credit. In addition, this is supported by the theory of optimal industrial location (Losch, 1954), where the easier the public access to a company, the more people who use the services and products of the company. If linked to this, if more people are able to access the bank, the number of accessors of services and products will also increase, including MSMEs credit, so that there will be an increase in the amount of MSMEs loans disbursed. From the description above, it can be formulated a hypothesis as follows

H2: Demographic Branch Penetration positively affects MSEMs credit in Indonesia

The Influence of Credit Acounts per Capita to MSMEs Credit

Credit Accounts per Capita is a measurement indicator of the usage dimension of financial inclusion, where this indicator is measured by looking at the number of credit accounts per 1.000 adult population. This indicator reflects the use of banking credit services by the people. The higher the calculation results, the more people who use banking services. With the increasing number of people who use the services and banking products, the greater the potential for increase in the amount of funds disbursed to the people in the form of credit, including MSMEs credit.

This is supported by the theory of modern financial intermediaries (Andries, 2009) that the more credit customers, the higher the deposit funds that can be distribute, in other words, the people and/or businessman who will get a channel of funds is a credit customer who will then become the target banks in channeling funds in the form of credit, including MSMEs credit. In addition, this is also in supported by research conducted Sharma (2016) which says there is a positive relationship between Credit Accounts per Capita and MSMEs credit. From the description above, it can be formulated a hypothesis as follows

H3: Credit Accounts per Capita positively affects MSMEs credit in Indonesia

The Influence of Deposit Acounts per Capita to MSMEs Credit

Deposit Accounts per Capita is one of the measurement indicators of the usage dimension in financial inclusion, where this indicator is measured by looking at the number of credit accounts per 1.000 adult population. This indicator reflects the use of deposit bank services by the people. The higher the calculation results, the more people who use deposit services. One of the largest sources of bank funds is from deposit that used to perform its function as an intermediary institution. Collecting funds obtained from the people and channeling back to market and businessman is an operational activity of banks called credit, including MSMEs credit.

4

This is supported by the theory of modern financial intermediaries (Andries, 2009), namely the end product of the banking is a loan given to credit customers and the main input is deposits (funds) obtained from depositors, therefore, many DPK customers will add funds to be disbursed including MSME credit. In addition, it is also supported by research conducted by Li et al. (2013), M. Taufiq & Batista Sufa Kefi (2013) and also Sharma (2016) who said there is a positive relationship between Deposit Accounts per Capita and MSMEs credit. From the description above, it can be formulated a hypothesis as follows

H4: Deposit Accounts per Capita positively affects MSME scredit in Indonesia

METHODOLOGY

Research Variables

There are two variables used in this study, the dependent variable is MSME credit in Indonesia (Y) which is the total of MSME credit that is distributed, and independent variables are Geographic Branch Penetration (X1) as measured by the number of bank offices divided by wide region and multiplied by 1.000, Demographic Branch Penetration (X2) measured by the number of bank offices divided by the number of adult residents and multiplied by 100.000, Credit Accounts per Capita (X3) as measured by the number of credit accounts divided by the number of adult population and multiplied by 1.000 and Deposit Accounts per Capita (X4) measured by the number of deposit accounts divided by the number of adults and multiplied by 1.000.

Samples

The population and sampling method used is the entire province in Indonesia and the *total sampling,* in other words, all samples will be used in this research, namely 34 provinces in Indonesia in 2012 until 2016. So that data to be processed is 165 data obtained from 33, namely the number of provinces in Indonesia reduced North Kalimantan which data is still joined with the West Kalimantan, multiplied by five, namely research period of five years from 2012 until 2016.

Methods

Hypothesis testing using multiple linear regression analysis technique that have previously passed the test classical assumptions (normality test, autocorrelation test, heteroscedasticity test and multicolinearity test) with the following model:

$$Y = a + b_1X1 + b_2X2 + b_3X3 + b_4X4 + e$$

Di mana:
Y1   = MSMEs credit
a   = constants
b_1–b_4 = regression coefficients
X1   = *Geographic branch penetration* (GBP)
X2   = *Demographic Branch penetration* (DBP)
X3   = *Credit Accounts per Capita* (CAC)
X4   = *Deposit Accounts per Capita* (DAC)
e   = residual variable

5

RESULTS AND DISCUSSION

Object Descriptions

The object of this research is the entire region of Indonesia. The sampling techniques used is the total sampling, where all samples will be used, namely 34 provinces in Indonesia. The observation data used is the annual data released by the Indonesia's Financial Services Authority (OJK), Bank of Indonesia (BI) and the Indonesia's Central Bureau of Statistics (BPS) in the period 2012-2016. So that the data to be processed as much as 165 data obtained from 33, namely the number of provinces in Indonesia reduced North Kalimantan whose data are still merged with West Kalimantan, multiplied by five, namely the five year study period from 2012 to 2016.

Results

Data is processed by multiple regression technique, previously tested the classical assumption. Based on the normality test, the data is not normal so data transformation needs to be done because the sample uses total sampling where all provincial data is used. After the transformation, all the classical assumption has passed the test.

Table 1. t test

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	20.805	.132		157.704	.000
Lag_GBP	.000	.001	-.118	1.279	.203
Lag_DBP	-.915	.081	-1.019	-11.327	.000
Lag_CAC	.001	.000	.520	4.317	.000
Lag_DAC	.002	.000	.916	8.037	.000

a. Dependent Variable: Lag_Y

Source : data processed

Based on the results of hypothesis testing result (table 1) that has been done, the results indicate that the variable Geographic Branch Penetration (GBP) has a positive and insignificant effect on total MSMEs credit. This can be seen from the value of the regression coefficient of GBP, 1,279 by showing a positive direction and significance level of 0.203. The positive regression coefficient indicates a one-way relationship, meaning that when the GBP increases, the total MSMEs credit will also increase, while a significance level greater than 0.05 reflects an insignificant relationship. this may be due to the variation of data (increment) of the GBP variable is not significant and small also affect the non-significant influence of GBP on MSMEs credit Therefore, H1 is rejected.

The Demographic Branch Penetration (DBP) variable has a regression coefficient of 11,327 indicating a negative direction and a significance level of 0.000. The negative regression coefficient shows the opposite relationship, that is, when DBP has increased, the total MSMEs credit will decrease. While the significant value indicates that the DBP has an influence on the dependent variable that is the MSMEs credit. Thus H2 is rejected. This may be caused by the transition of media transactions with technology, because in this millenium decade, there is an

online credit application program and also e-banking users which rose up to 270 percents in the period 2012-2016 (OJK, 2017).

The Credit Accounts per Capita (CAC) variable has a regression coefficient of 4.317 indicating a positive direction and a significance level of 0,000, so H3 is accepted. This is supported by the theory of modern financial intermediaries (Andries, 2009) in which people and / or businessman who will get channel funds, derived from deposit, will become the target of banks in channeling credit, including MSMEs credit. This is also in line with research by Dipasha Sharma (2016) and Ghosh (2011) who also stated that the CAC variable has a positive and significant effect on MSME credit, where the use of banking products and services (to credit customers) can increase economic growth also supported by the increase of MSMEs credit.

The Deposit Accounts per Capita (DAC) variable has a regression coefficient of 8,037 with a positive direction and a significance level of 0.00, so H4 which states that Deposit Accounts per Capita have positive and significant effect to MSMEs credit in Indonesia, accepted. This is in line with the modern financial intermediary theory (Andries, 2009) which also states that as more customers or people open up third deposit accounts (demand deposits, savings and time deposits), it will increase the funds that are then channeled back into the people in the form of credit, credit MSMEs. And this is also in accordance with research that has been done by Sharma (2016), Li et al. (2013) and Ghosh (2011), that stated that DAC has a positive effect on MSMEs credit, where the use of banking products and services, especially deposits, can increase economic growth which is also supported by the growth of MSME credit.

CONCLUSION

The results of this study indicate that geographic branch penetration has positive and insignificant effect on MSMEs credit, demographic branch penetration has a negative and significant effect on MSME credit, while the use of credit account and deposit accounts have positive and significant effect to MSMEs credit. The interesting thing in this research is that demographic branch penetration which is expected to have positive effect on MSMEs credit gives negative result, indicating that more branches of banks in a region turns out that the number of MSMEs credit is channeled less and vice versa. this may be caused by the transition of media transactions with technology, currently there is an online credit application program plus e-banking users who rose up to 270 percent in the period 2012-2016 (OJK, 2017). This study still has limitations that can be used as consideration for subsequent research in order to get better results in the future, the limitation is the period that is used only five years from 2012 until 2016, so when another research use different period, longer or different years of observation, then there is a chance that the results will also be different, besides that the result of determination coefficient test (R2) is still low and this study has not compared between provinces.

REFERENCES

Allen, F., Demirgüç-Kunt, A., Klapper, L., & Martinez-Peria, M. S. (2012). *The Foundations of Financial Inclusion: Understanding Ownership and Use of Formal Accounts. World Bank Policy Research Paper No. 6290.*

Andries, A. M. (2009). Theories Regarding Financial Intermediation And Financial Intermediaries – A Survey. *The Annals of the "Stefan Cel Mare" University of Suceava. Fascicle of The Faculty of Economics and Public Administration*, 9(2(10)), 254–261.

Ayuba, B., & Zubairu, M. (2015). Impact of Banking Sector Credit on the Growth of Small and Medium Enterprises (SME ' s) in Nigeria, *15*, 1–9.

Bank Indonesia. (2013). Evolusi Kerangka Kebijakan Financial Inclusion, (November).

Bank Indonesia. (2014). Booklet Keuangan Inklusif, 17.

Bank Indonesia. (2017). Indikator Kauangan Inklusif. Retrieved from http://www.bi.go.id/id/perbankan/keuanganinklusif/indikator/kualitas/contents/default.aspx

Beck, T., Demirguc-Kunt, A., & Martinez Peria, M. S. (2008). Symposium on Access to Finance: Banking Services for Everyone? Barriers to Bank Access and Use around the World. *World Bank Economic Review*, 22(3), 397–430. https://doi.org/10.1093/wber/lhn020

BI. (2015). Profil bisnis usaha mikro, kecil dan menengah (umkm).

Billi Arma, P. (2010). Analisis Faktor-Faktor yang Mempengaruhi Kebijakan Penyaluran Kredit Perbankan (Studi pada Bank Umum Indonesia Periode 2005-2009). *Tesis, Program Pa*, 1–12.

Darmawi, H. (2011). *Manajemen Perbankan* (1st ed.). Jakarta: Bumi Aksara.

Ghosh, S. (2011). Does financial outreach engender economic growth? Evidence from Indian states. *Journal of Indian Business Research*, 3(2), 74–99. https://doi.org/10.1108/17554191111132206

Ghozali, I. (2013). *Aplikasi Analisis Multivariate dengan Progran IBM SPSS 21* (7th ed.). Semarang: Badan Penerbit Universitas Diponegoro.

Kasmir. (2004). *Bank dan Lembaga Keuangan Lainnya*. Jakarta: PT Raja Grafindo Persada.

Khan, S. H. R. (2011). Financial inclusion and financial stability : are they two sides of the same coin ? *Indian Bankers Association & Indian Overseas Bank, Chennai*, (November), 1–12.

Kohler, E. L. (1972). *A Dictionary for Accountants*. Englewood Cliffs: Prentice-Hall International Inc.

Li, R., Li, Q., Huang, S., & Zhu, X. (2013). The credit rationing of Chinese rural households and its welfare loss: An investigation based on panel data. *China Economic Review*, 26(1), 17–27. https://doi.org/10.1016/j.chieco.2013.03.004

Losch, A. (1954). *The Economic of Location*. New Jersey: New Haven.

M. Taufiq & Batista Sufa Kefi. (2013). Pengaruh dana pihak ketiga terhadap kredit pada bank perkreditan rakyat di indonesia. *Issn*, (35), 1–15.

Nguyen, N. (2014). Credit Accessibility and Small and Medium Sized Enterprise Growth.

Nu, P., & Le, M. (2012). What Determines the Access to Credit by SMEs ? A Case Study in Vietnam. *Journal of Management Research*, 4(4), 90–115. https://doi.org/10.5296/jmr.v4i4.1838

OJK. (2017). Panduan Penyelenggaraan Kantor Digital Wujudkan Perbankan Digital di Indonesia, 1–2.

Quoc, D. V. (2012). Determinants of household access to formal credit in the rural areas of the Mekong Delta, Vietnam, (25162).

Rahman, M. I., & Widyarti, E. T. (2017). Analisis pengaruh pendapatan, pendidikan, suku bunga, penetrasi demografis dan geografis perbankan terhadap kredit umkm.

Republik Indonesia. (1998). Undang-Undang Republik Indonesia Nomor 10 Tahun 1998 Tentang Perubahan Atas Undang-Undang Nomor 7 Tahun 1992 Tentang Perbankan. *Www.Hukumonline.Com*, 1–29.

Sarma, M. (2012). Index of financial inclusion – A measure of financial sector inclusiveness. *Berlin Working Papers on Money, Finance and Trade Development*, (7), 1–34.

8

Sharma, D. (2016). Nexus between financial inclusion and economic growth: evidence from the emerging Indian economy. *Journal of Financial Economic Policy*, *8*(1).

Sugiyono. (2010). *Metode Penelitian Bisnis*. Bandung: Alfabeta.

Togba, E. L. (2012). Microfinance and households access to credit: Evidence from Côte d'Ivoire. *Structural Change and Economic Dynamics*, *23*(4), 473– 486. https://doi.org/10.1016/j.strueco.2012.08.002

World Bank. (2004). Measuring banking sector outreach •, 1–7.

World Bank. (2007). Microcredit Project. Retrieved from http://projects.worldbank.org/P051310/microcredit-project?lang=en

THE EFFECT OF FINANCIAL INCLUSION TO MICRO SMALL AND MEDIUM ENTERPRISES CREDIT IN INDONESIA

PRIMARY SOURCES

1 **Submitted to UIN Walisongo**
   Student Paper
   2%

2 T. Ravikumar. "Financial access indicators of financial inclusion: a comparative analysis of SAARC countries", International Journal of Intelligent Enterprise, 2020
   Publication
   1%

3 serialsjournals.com
   Internet Source
   1%

4 Submitted to Sriwijaya University
   Student Paper
   1%

5 ijetsr.com
   Internet Source
   1%

6 "Financial Inclusion in Asia", Springer Science and Business Media LLC, 2016
   Publication
   1%

7 Vibha Bhandari, Vikram Mohite. "Banking Outreach: A Geographic and Demographic
   1%

Analysis for Countries of the Gulf Cooperation Council", Emerging Economy Studies, 2020

Publication

8   "Transforming Payment Systems in Europe", Springer Science and Business Media LLC, 2016   1%

Publication

9   e-journal.unipma.ac.id   1%

Internet Source

10   Suratmi, Ika Yustina Rahmawati. "The Effect of Profitability Ratio, Liquidity Ratio, Leverage Ratio, and Company Size on Sukuk Rating Corporation During 2014-2017 Periods", SHS Web of Conferences, 2020   1%

Publication

11   researchleap.com   1%

Internet Source

Exclude quotes	On	Exclude matches	< 1%
Exclude bibliography	On		

THE EFFECT OF FINANCIAL INCLUSION TO MICRO SMALL AND MEDIUM ENTERPRISES CREDIT IN INDONESIA