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The Nexus Between Financial Inclusion and Economic Growth in ASEAN

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Abstract

Inclusive growth has recently become an interesting issue to be studied more deeply, especially in the financial sector as outlined in the concept of financial inclusion. The role of the financial sector is important considering this sector is the primary sector in encouraging economic activity especially in the real sector. This study aims to analyze the influence and long-term relationship of financial inclusion through the instrument of the number of Automatic Teller Machine (ATM)s and commercial bank branches on ASEAN economic growth through Gross Domestic Product (GDP). The data used is secondary data in the form of an annual panel consisting of ASEAN countries with the period of 2008-2015 for the purpose of seeing the impact after the global crisis that occurred. The method used Panel Vector Error Correction Model (VECM) to see the long-term relationship and the GDP response when shocks occur in the variable financial inclusion. The result of estimation shows that financial inclusion through the number of ATMs and the number of branches of commercial banks were able to contribute positively to economic growth in ASEAN.

Key words : Financial Inclusion, Economic Growth, the Nexus.

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INTRODUCTION

Economic liberalization has played an important role in economy as well as integrating the domestic economy in all sectors. One form of economic integration carried out through the financial sector is considered to have an important role in economic activity. Most developing countries such as ASEAN members have recently carried out studies in order to formalize and enhance the role of the financial sector through financial services with the concept of financial inclusion. In the beginning, financial inclusion was a new concept by playing the role of financial sector integration to improve a country's economic growth and development.

The concept of financial inclusion was popularized along with the concept of inclusive growth which included interventions in the financial sector in creating economic growth and development. Starting from the Leaders' Summit at Los Cabos Mexico held in 2012, the launch of the Financial Peer Learning Program and the Global Partnership on Financial Inclusion was a form of promotion of financial inclusion interventions. Then several studies from international organizations began to carry out various studies to reach a definition of the concept of inclusive growth, one of them through financial inclusion. This inclusive growth is an important capital for the sustainability of developing countries as an effort to reduce and minimize problems of inequality, poverty and other social problems (ADB, World Bank, OECD, 2014).

According to Schumpeter as an economic pioneer who emphasizes the role of innovation in creating development and economic growth, the concept is included in the financial development model that is carried out through financial inclusion. This concept is forced to encourage inclusive

growth as outlined in a country's economic growth performance pattern. Saab's empirical study (2017) showed that financial innovation for provision, education and financial services was important in an economic development. Several empirical studies have also highlighted a lot related to financial development carried out through the concept of financial inclusion to improve economic development, reduce poverty and minimize inequality. Kunt et al (2017) in his empirical study also highlighted the role of financial inclusion in creating inclusive growth that not only refers to increasing economic growth but also to the social side to reduce poverty and inequality. By using the object of adult population research in the poor category, especially female samples, the results of the analysis show that payment services, savings accounts, loans, and insurance can contribute to inclusive growth and economic development. Another study that highlighted the development of financial inclusion in Tanzania by Mwaitete and George (2018) showed that the instructors of financial inclusion through loans in the productive sector were able to contribute to the percentage increase in GDP.

In general, from various definitions, financial inclusion is a process of providing financial services with minimum costs so that they can be reached by all levels of society in order to support their economic activities without any discrimination in their use (Okoye, et al. 2017). The concept of financial inclusion is important as a form of the country's efforts through the multiplication sector to improve welfare, especially for people who have knowledge and low access to the banking sector. In its concept, financial inclusion can be measured from different indicators both in the context of macroeconomics and banking. In the macro context, The Global Partnership of Financial Inclusion (GPFI) and The Consultative Group to Assist the Poor (CGAP) define financial inclusion as a form of effective service access that can reach all workers including payment of

savings, loans and insurance available to financial institutions formal (CGAP, World Bank, 2010; Jurgens, 2016).

This financial service and access must have a positive contribution to the welfare of the community so that its use must have a high responsibility at a lower cost so that sustainability can be affordable especially for low-income people (Nancy et al, 2016). According to the Alliance for Financial Inclusion (AFI), there are 4 indicators that are important in the context of financial inclusion which include access, use, quality and welfare (RoaJose, 2015). Access indicators include financial services and the provision of banking products from formal financial institutions such as MSME loans, term loans for the middle to lower class, providing bank offices and can be ATM services. This use can be seen from the depth performance of financial services that can be accessed and used by the community. In addition, the quality of access and financial services must demonstrate the feasibility in applying the financial needs needed by the community. Of the three indicators, it can finally provide a signal for people's welfare.

Some ASEAN countries also have different patterns in playing a financial role to encourage their country's economic growth. This pattern can be seen from financial sector data information, especially on financial inclusion instruments in its contribution to economic growth through GDP performance. The lack of access and service of low income communities in the financial sector in developing countries such as some ASEAN members is the main thing that underlies this research. As many as 55% of low-income households do not have bank accounts, 97% do not have health insurance and 61% do not have life insurance due to the lack of financial access to middle-income people in developing countries. This form of financial inclusion can

be in the form of financial services and financial access such as the number of bank ATMs, number of bank branches and financial literacy rates.
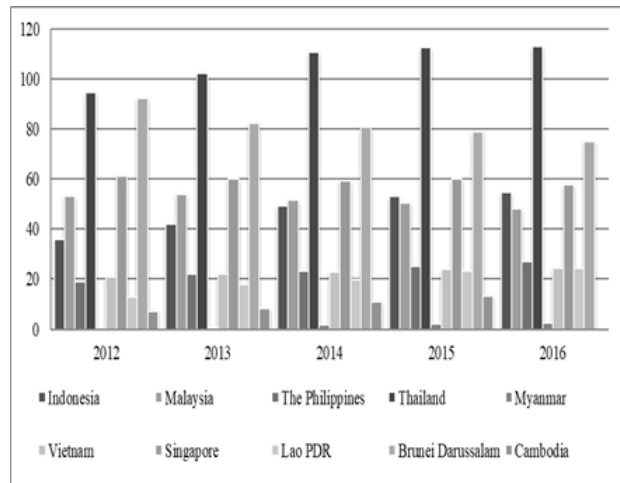
Source: World Bank (2018)

Figure 1. Number of ATMs in ASEAN

The form of financial inclusion in terms of the number of ATMs in ASEAN countries is shown in Figure 1. The number of ATMs in general has increased for ASEAN countries except in Singapore and Brunei Darussalam which experienced fluctuations in the number of ATMs. Thailand is the country with the highest number of ATMs in ASEAN with 113.0618545 per 100,000 adults in 2016. While Myanmar has the lowest number of ATMs compared to other ASEAN countries, the number is 2.671239398 per 100,000 adults in 2016. On the other hand, Indonesia, Malaysia and Singapore are still classified countries with a high number of ATMs in the ranks of ASEAN countries considering these countries are included in the group of middle to upper income countries and high income countries for classification in ASEAN. Another proxy for detecting financial inclusion performance can be seen from the number of commercial bank branches in one country as a form of service and access to the community. In addition, the level of financial literacy can

used to see the depth of public knowledge about finance.

Several recent empirical studies have intensively carried out studies on the role of the financial sector through financial inclusion programs in promoting economic growth and the welfare of the people in developing countries. The latest research conducted in Tanzania by Mwaitete and George (2018) highlights the role of financial inclusion instruments in contributing to economic growth through GDP performance.

The findings using panel data show that financial inclusion variables make a positive and significant contribution in driving economic growth through access and financial services variables such as the number of bank account usage, loan accounts at commercial banks and the number of commercial bank branches. The same thing was also shown by the Kenya study conducted by Julie (2013). This study concludes that economic growth in Kenya has a strong positive relationship with financial inclusion in Kenya. These results are reflected in a strong positive relationship between network banks, account users or ATM services. However, it was also identified that the use of teller machines and bank loan interest rates had a negative influence despite being weak against economic growth in Kenya. The highest contribution is indicated by the number of bank networks and the number of ATM usage. These results indicate that optimal service and financial access in Kenya were able to make a major contribution to Kenya's economic growth. While in South Africa, financial inclusion still faces several obstacles so that its role does not yet have a major contribution to increasing economic growth especially for rural communities in South Africa. Such a study reviewed by Oji (2015) highlights more about regulatory solutions to enhance the role of the financial sector in improving the welfare and economic

growth of the South African community. The findings prioritize policies related to increasing access to finance and financial literacy so as to increase financial demand.

The importance of financial inclusion, especially for developing countries, the majority of which are still dominated by un-bankable populations, needs to be increased. The existence of the financial sector can contribute high and optimally in supporting a country's economic growth if the financial flow cycle can run well through optimal access and public services in using financial services. In addition, this indicator of financial inclusion is prioritized for people who still have limited access to financial services.

Some ASEAN countries also have different patterns in playing a financial role to encourage their country's economic growth. This pattern can be seen from information on financial sector data, especially on financial inclusion instruments in their contribution to economic growth through Gross Domestic Product (GDP) performance. The lack of access and service of low income communities in the financial sector in developing countries such as some ASEAN members is the main thing that underlies this research. As many as 55% of low-income households do not have bank accounts, 97% do not have health insurance and 61% do not have life insurance due to the lack of financial access to the lower middle class in developing countries. This form of financial inclusion can be in the form of financial services and financial access such as the number of bank Automatic Teller Machine (ATM), the number of bank branches and the level of financial literacy.

The number of ATMs in general has increased for ASEAN countries except in Singapore and Brunei Darussalam which have experienced fluctuationsin number ATM. Thailand is the country with the highest number of ATMs in ASEAN. While Myanmar has the lowest number of ATMs compared to other ASEAN countries. On the other hand, Indonesia, Malaysia and Singapore are still classified countries with a high number of ATMs in the ranks of ASEAN countries considering these countries are included in the group of middle to upper income countries and high income countries for classification in ASEAN. Another

proxy for detecting financial inclusion performance can be seen from the number of branches of commercial banks in one country as a form of service and access to the community. In addition, the level of financial literacy can be used to see the depth of public knowledge about finance.

The importance of financial inclusion in the context of accelerating the growth and development of a country is the main objective of this research. Through the simplest variable number of ATMs and commercial bank branches and commonly reached by ASEAN people in general, this study intends to detect the influence and long-term relationships that occur between the variables of financial inclusion on economic growth in ASEAN countries. In addition, this study also tries to look at the response between the variables of financial inclusion and economic growth when the phenomenon of global shock caused by the 2008 subprime mortgage crisis and the European debt crisis in 2011 that had a significant impact on the global economy, including ASEAN countries.

RESEARCH METHOD

This research uses secondary data types sourced from World Bank in the form of panel data with annual series starting from 2008-2015 with cross sections of ASEAN member countries so that the number of research observations is 80 observations. ASEAN, which is predominantly populated by middle and lower income developing countries except Singapore and Malaysia, is the basis for sample selection to see financial depth through financial inclusion instruments in contributing to economic growth. In addition, data collection in the period 2008-2015 also aims to see the response between the variables of financial inclusion and economic growth in response to the economic turmoil that occurred in two terms, namely between 2008 and 2011 which had a major impact on the performance of the global economy. The data used includes data on the number of ATMs per 100,000 adults,

the number of commercial bank branches per 100,000 adults and real GDP (%) for each country in ASEAN.

Based on the purpose of this study to see the relationship and the long-term influence and response between the variables of financial inclusion and economic growth in ASEAN, the Panel Vector Error Correction Model (VECM) method is used. In this method there are several pre-estimation tests before looking at the effect on financial inclusion variables and economic growth in ASEAN. VECM is one of the maximum likelihood methods that is complete so that it does not require a normalization step on certain variables (Maysami and Koh 1998). VECM is a derivative of the VAR method designed to analyze variables or data that are not stationary at the level but there are long-term relationships or (Surjaningsih, et al. 2012). While to find out the long-term estimation of the model used, it is better to do a VECM estimation because the estimation produces an error rate that is much smaller than the VAR estimation because the correction variable in VECM can minimize the error term (Yin Kuo, 2016). In addition, the use of VECM estimation also overcomes the problem due to the existence of a one-way causality relationship so that this VECM estimate can show the direction of the relationship (Abu-Bader and Abu Qarn, 2007). The VECM estimation model does not have a limitation if there is limited data to find short-term relationships between variables (Pesaran, 2000).

Based on the hypothesis that combined with the method of estimation data in this study, the simulation modeling can be used as follows:

$$GDP_{it} = ATM_{it} + Branches\ Bank_{it} + e \quad (1)$$

then lowered in the estimation Panel VECM as follows:

$$GDP_{it} = \beta_{iit} + \beta_2 ATM_{it-1} + \beta_3 Branches\ Bank_{it-1} + ECT \quad (2)$$

Where GDP as a proxy for economic growth, and inclusion instruments consisting of ATMs as a proxy for the number of ATMs and branches banks show the number of commercial banks that carry out service activities to the public, it is

a symbol of panel data consisting of ASEAN countries, while β_1, β_2, and β_3 are parameters of simulated modeling and ECT is an error term contained in the VECM estimation model.

Before stepping on the VECM estimation, there are several tests that are used to see the form of feasibility and validity of the data used. Some of them include the stationarity test of data through the root test on each variable so that it can be seen whether the data is normally distributed and feasible for further testing. Data that is too large in the observation period of this study will have a tendency to approach the average value. So it needs to be reviewed whether the coefficients used in the model have a value of one (Gujarati 2009). In addition, the optimum lag test is also performed to determine the optimum lag in the model used in the study. To see the optimum lag can be seen from Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC) and Hannan-Quiin Information Criterion (HQ), namely by looking at the lowest values of AIC, SC and HQ from the first lag to the maximum lag (Rosadi, 2012).

Furthermore, cointegration tests are carried out as a continuation of unit root tests and integration degree tests to ascertain in advance whether the data on the tested variables have the same and similar degrees of integration. The variables that are said to be cointegration are if the value of ε does not contain the trend or unit root and there is no identifiable long-term balance (Rosadi 2012). Some methods used to see cointegration include Engle-Granger (EG), cointegration test Regression Durbin-Watson (CDRW) and Johansen Test (Widarjono, 2005). But in this study using the Johansen Test to see cointegration in the model of financial inclusion and economic growth in ASEAN so that it can be seen how the pattern of financial inclusion relations and economic growth in ASEAN as a whole.

To see the effect of the variables of financial inclusion and economic growth in ASEAN, it can be seen through the VECM estimation results that have been carried out according to the modeling by looking at the probability values found in each variable.

Then entering the VECM model estimation, there are two important tests including the Impulse Response Function (IRF) and Variance Decomposition (VD) tests which have the main objective to see the response and contribution of variable financial inclusion and economic growth in ASEAN. The Impulse response function (IRF) aims to structure the dynamic structure of the VAR model with an illustration of the effect of shock between variables on the model. IRF describes the response of the dependent variable to shocks that occur in independent variables (Gujarati, 2009). In addition to the IRF to see the pattern of shocks that occur in the variable endogenous and exogenous, there is a variance decomposition (VD) which also explains the dynamic structure of the VAR model by looking at the contribution value indicated on the VD in the form of presentation.

RESULTS AND DISCUSSION

The first step before estimate VECM model is stationarity test on each variable in the model with the results as follows:

Table 1. Test of Stationarity

Variables	Stationarity (Level)	Stationarity (First)
ATM	0.0057	0.0000
Branches Bank	0.2123	0.0000
Real GDP	0.0000	0.0000

Source: Data Processed, 2018

Table 1 shows that in the data stationarity test, the ATM variable and real GDP have stationarity at the level of the level identified by the probability value less than the alpha value of 0.0057 and 0.0000. While the bank branch has stationarity at the level of the first difference indicated by a probability value of 0.0000. Based on the estimation method used, when one of the data is not stationary at the level, the VECM estimation can be used for further estimation. After knowing the unit root test or data stationarity, then what is done is the optimum

lag test through the Akaike Information Criterion (AIC) method by looking at the lowest value in the first lag until the optimum lag.

Table 2. Optimal Lag Test

Lag	AIC	SC	HQ
0	19.21748	19.36146	19.26029
1	10.33687	10.91280	10.50813
2	9.612480	10.62035	9.912174
3	9.139456	10.57927	9.567589

Source: Data Processed, 2018

In the optimum lag test, it can be seen from Table 2 that the optimum lag in this model lies in the 3Rd lag. Furthermore, to see the long-term relationship in this model a cointegration test is conducted through the Johansen test by looking at the value or value of critical values and trace statistics on the results. The Johansen test cointegration test shows that with a critical value of 0.05 and a Maximum-Eigen value of 1 it can be concluded that the equation in the research model between the variables of financial inclusion and economic growth in ASEAN have a long-term relationship. This is confirmed by the value of Maximum Eigen value greater than the critical value of 1, greater than 0.05.

Table 3. Estimation of VECM

Variables	Coefficient	Prob.
D * (GDP (-1)	-0.105506	0.4448
D * (GDP (-2)	0.048539	0.5909
D * (GDP (-3)	0.061725	0.3486
D (ATM (-1)	-0.069643	0.3219
D (ATM (-2)	-0.070797	0.3100
D (ATM (-3)	0.135995	0.0194
D (BB (-1)	0.360894	0.0713
D (BB (-2)	0.600233	0.0435
D (BB (-3)	0.515611	0.0800

Source: Data Processed, 2018

While the VECM estimation results to see the relationship between the variables of financial inclusion and economic growth in ASEAN are shown in the following equation in table 3.

Estimated results show that with alpha values 5% and 10%, the variable number of ATMs in the 3Rd lag period has a significant positive effect on economic growth in ASEAN with a probability value of 0.0194 <0.05 or 0.1 and a coefficient of 0.135995. It means that when there is an increase in the number of ATMs equal to the coefficient value, then increasing economic growth is equal to the coefficient value, then the number of commercial bank branches also shows significant positive effects of lags 1, 2 and 3 Which are confirmed by the probability value of all three of the 10% alpha values includes the number 0.0712; 0.0435 and 0.0800 with the magnitude of the coefficients respectively 0,360894; 0,600233 and 0,515611. This means that when there is an increase in the number of branches of commercial banks at the coefficient value of each in the lag period 1,2 and 3, it will increase economic growth by the coefficient value.

Furthermore, to see the response of the dependent variable due to the shock that occurs in the financial inclusion variable is shown in the results of the Impulse Response Function (IRF) in Figure 2 below.
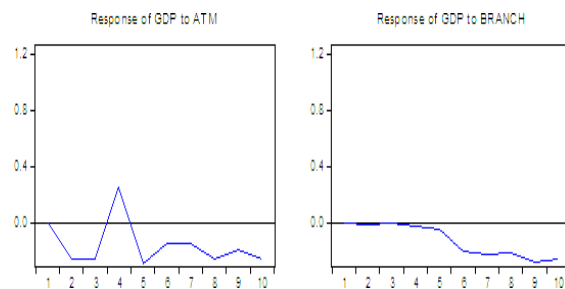

Figure 1. Impulse Response GDP, ATM and Branch

The IRF results show the response of ASEAN economic growth represented by GDP to the shock that occurred in financial inclusion

during the study period (2008-2015). The IRF results confirm that the GDP response to the shock or variable movement of ATM financial inclusion is quite fluctuating until the 10th period during the study period. This is seen when there is an increase in the number of bank branches, at the highest point in the 4th period, GDP also responds with a GDP increase of 0.3 in that period. Then the response decreased until it reached its lowest point of -0.03 in the 5th period up to the 10th period during the period of research that did not reach the steady state point. While GDP is more stable in response to shocks at commercial bank branches in ASEAN, it is indicated by a stable movement from periods 1 to 4 which moves at the steady state point. The times in the 5 to 10 periods tend to decrease in response to reach the lowest point in the 9th period with a value of -0.03 to the 10th period which does not reach the steady state point. These results can be concluded that GDP has a response that tends to be high against the number of ATM shocks than the number of commercial bank branches in ASEAN. Meanwhile, to see the large contribution of the GDP response to financial inclusion variable shocks in ASEAN can be identified through the Variance decomposition table.

Table 4. Variance Decomposition

	Response of GDP		
Period	GDP	ATM	Branch
1	1.260003	0.000000	0.000000
2	0.125754	-0.247525	-0.000760
3	0.168866	-0.249510	0.006705
4	0.031006	0.264556	-020512
5	0.061330	-0.287384	-0.040431
6	-0.022014	-0.135919	-0.198187
7	0.043887	-0.141813	-0.217317
8	0.079162	-0.248210	-0.203406
9	0.078831	-0.183662	-0.268058
10	0.137122	-0.249354	-0.245395

Source: Data Processed, 2018

The contribution of the GDP response to financial inclusion shocks through the number of ATMs and commercial bank branches was confirmed by the variance decomposition (VD) value in Table 5. Response GDP in the change in the number of ATM shocks is enough to show fluctuations at the beginning of the period with a contribution value of -0.247525 in the second period to the 4th period to reach a positive number of 0.2649510 and at the end of the period with a negative response with a VD of -0.2249354. While at the commercial bank branch, GDP gives a fairly good response and tends not to fluctuate with positive contributions at the beginning of the period with contributions of 0.006705 in the 3Rd period and -0.245395 in the final period of the study.

The results of the analysis show that at a certain period reflected from the optimum lag in the 3Rd lag so to see the best estimation results can be identified on the variable probability at the optimum lag. Based on the VECM estimation results it was identified that financial inclusion made a positive contribution to economic growth in ASEAN. This result is confirmed by a significant probability value on the ATM variable on the 3Rd lag and the number of commercial bank branches in lags 1,2 and 3. The role of the financial sector in contributing to economic growth has recently become an interesting theme to be studied more deeply. If viewed from a financial perspective related to financial literacy, ASEAN people experience increased knowledge about financial literacy so that their awareness of the importance of the role of banks in their economic activities has also increased (BIS, 2015). This has encouraged the ASEAN community to be able to utilize services and access to finance through the use of the number of ATMs and branch access services for commercial banks to increase every year which has a positive impact on economic growth in ASEAN. After the global shocks that resulted in the deterioration of the world economy, especially in the financial sector, it succeeded in

enerating a variety of designs and new policy simulations to improve and accelerate productive economies to increase ammunition to the economy (Hannig and Jansen 2010). Along with that, the concept of inclusive growth emerged as an effort to accelerate the economy and create sustainable growth. One of the instruments of inclusive growth is designed to enhance the role of the financial sector through financial inclusion. During the period of post-crisis recovery, as an instrument of financial inclusion, credit performance also increased, especially in the productive sector, this turned out to be able to drive economic performance that was increasing (GFDD, 2015).

In the beginning, this financial inclusion was designed to accelerate the economy and create an economic balance both from the social and economic sectors. In the social sector, financial inclusion is directed at reducing inequality and poverty and improving the performance of the productive sector especially for small businesses (Boukhatem, 2015). The contribution of financial inclusion through services and access to finance has a positive performance. This condition is reflected in the aggregate increase in financial development such as deposits, credit and financial intermediaries (Ayyagari and Bect, 2015) which will automatically play the role of higher financial access both in terms of ATM usage or increased commercial bank branch services in ASEAN. The results of this study are also supported by the Ayyagari and Bect (2015) study by confirming that financial depth through financial inclusion in Asia massively contributed positively to economic growth as indicated by an increase of 27% having formal accounts for financial access and 33% of companies reporting ownership of credit and loans to commercial banks that help increase their production output. This

condition indicates that the success of performance into finance in ASEAN and Asia is able to encourage the creation of massive growth especially in reducing poverty.

In general, financial inclusion is very important to maintain economic and social development. In addition, financial inclusion is also expected to lead to greater stability and financial growth. This condition has prompted several countries to use financial inclusion as one of the spears of change, as happened in the People's Republic of China (PRC), India, Indonesia, the Philippines and Thailand (ADB, 2014). Although each of them has a different concept in implementing financial inclusion, but in the past 10 years, the agenda for implementing financial inclusion has been able to contribute well to growth.

Basically, the increasing flow of globalization in the global environment must also be accompanied by development that is evenly distributed throughout the country to improve welfare. Financial inclusion is one of the foundations of the concept of inclusive development which is driven from the banking sector to increase people's productivity through access and financial services. This financial inclusion has become a platform to increase community integration in access to financial products such as credit and other financial services with ease. So that in the policy framework of developing countries to minimize socio-economic disparities and improve equity, financial inclusion is one of the instruments that can provide appropriate alternatives. The disparity that is still dominant in developing countries is one of which is reflected in the lack of access and financial services, especially in disadvantaged areas so that there needs to be equitable financial development. One of the measurements of financial development is seen from the ownership of financial and credit card accounts in rural areas where the majority have financial access difficulties.

Based on Financial Index (Findex) data sourced from World bank (2018) explained that in n-countries ASEAN countries have several different characteristics that are supported by the progress of their respective countries. This condition is proxied from a number of banking services and access components, but in this presentation only the service description and banking access that reaches rural areas is owned by residents of rural areas in ASEAN countries.

In 2017, Indonesia achieved credit ownership data in rural areas in the productive age population of around 2.51%, loans from banking institutions and credit card usage reached around 19.91% and banking account ownership reached 62.72%. Then in Malaysia it was higher than Indonesia with credit card ownership in rural areas reaching 16.52%, borrowing from banking services amounting to 15.71% and banking account ownership reaching 80.99%. Similar to Malaysia, Thailand also has banking access and services to the rural population above Indonesia, with a credit card ownership rate of 7.74%, banking loans of 20.42% and banking account ownership of 80.70%. Meanwhile, for the Philippines, Cambodia, Laos and Myanmar have access and financial services to the rural population under Indonesia, Malaysia and Thailand. In the Philippines credit card ownership is only around 1.46%, loans to banking services are around 10.27% and banking account ownership reaches 27.40%. Compared to the Philippines, in Vietnam the ownership of credit cards for rural residents is higher at around 3.55%, while lending to banking services is around 24.61% and ownership of banking accounts reaches 25.19%. In Myanmar, ownership of credit cards in rural areas cannot be detected properly, while loans for banking services reach around 25.34% and

banking account ownership reaches 25.03% (World bank, 2018).

Meanwhile, in Laos, a small country with a classification of middle and lower income countries that is slightly above other ASEAN countries, financial access is also still low. This condition is confirmed by the level of credit card ownership reaching only 0.6%, lending to banking services around 9.20% and banking account ownership reaching 22.40%. In Cambodia, credit card ownership and lending to banking services are higher than in Indonesia, Thailand and Malaysia with numbers reaching 5.94% and 27.52% respectively, while banking account ownership is still low at only 19.21%. The index of Brunei Darussalam was not detected in global financial inclusion. Different things are shown by Singapore as a developed country in the ASEAN region.

Credit card ownership, lending to banking financial services and banking accounts are 100% owned by the productive age population in the periphery. This descriptive shows that the majority of countries in ASEAN that are included in the classification of middle-income countries have access and adequate financial services to rural areas. While for Laos, Cambodia and Myanmar they still have minimal service and financial access. Different things are shown by high-income countries such as Singapore with maximum access and financial services (World bank, 2018). When combined with the results of research, in the majority that financial inclusion through services and financial access in this case the number of ATMs and branches of commercial banks make a significant positive contribution to long-term economic growth in ASEAN.

Various banking and development policies also support financial inclusion programs to improve equity. In the mission of world institutions, financial inclusion is also one alternative to reduce poverty so that the direction of this policy concept leads to the use of formal financial services both provided by

banks, insurance companies and microfinance institutions (World bank, 2015). The efficiency and effectiveness of financial services also encourages ease of service and financial access, especially for people who are in a condition un-bankable. Global financial index (2010) suggests that technological advances are also a strength in making new breakthroughs in financial development to achieve efficiency and ease of access and financial services.

This technology is an important component to make new innovations in financial products so that it can attract the interest of the poor in accessing and financial services, of course, with low costs and risks. This is because the mindset of the poor still has a high level of distrust and very little financial literacy, so their preferences in using financial products are also low. As in the survey conducted by the Consultative Group to Assist the Poor (CGAP) and the GSM Association (GSMA) that 147 markets in the Philippines and found 90% of the people kept their money in banks but at home, neighbors or village savings groups. In addition, there are also those who save their money in the form of assets such as goods, animals and so on. This indicates that community trust and literacy towards financial institutions is still very minimal. While in other developing countries such as India, about 20% of the productive population has no access or account in the banking sector. Access to financial services such as access to credit is also very low, and almost 60% of the people prefer to borrow money from moneylenders. Meanwhile, in the Philippines, almost 13% of people who make loans prefer to borrow from individuals and 17% from microfinance institutions.

The role of microfinance institutions (MFIs) in promoting financial inclusion in the past few decades has shown success. In the past decade, MFIs have contributed positively to financial inclusion programs in America, South Asia and Southeast Asia because public trust in MFIs is higher than commercial banking (Global Financial Index, 2010). In the vulnerable period of 1997-2006 it was noted that the number of micro-credit borrowers served by MFIs reached a 10-fold increase to 130 million individuals in these 3 regions. Easier financial services and access to MFIs is considered to be one of the factors that drives the performance of MFIs in accelerating the financial sector. The World Savings Bank Institute (2005) has identified client accounts of financial institutions including MFIs to reach 1.4 billion accounts. In this case, MFIs can accelerate their development quickly and effectively, especially for consumers of financial products that are in the category of poverty line and accelerate the acceleration of financial inclusion with a wide range. This financial product innovation is also integrated by government regulations to maintain its sustainability. One form of government regulation is related to the costs incurred in accessing financial services so that they can be reached massively by the public and do not cause harm to the banks through consumer protection regulations.

Initially, financial institutions played an important role through an intermediary function to encourage economic growth, equal income, reduce poverty, and achieve financial system stability, but this was not accompanied by ease of service and access to financial products (Bank Indonesia, 2014). Meanwhile, access to financial services is an important prerequisite for community involvement in the economic system. Based on the World bank survey (2010), it shows that 49% of households in Indonesia have access to formal financial institutions while 51% are in an un-bankable condition. Departing from these conditions, financial inclusion activities become a priority agenda in the international world. Various international level

forums (G20, APEC, OECD, AFI and ASEAN) intensively discussed financial inclusion in addition to increasing the role of financial institutions also aimed at increasing equity and reducing poverty. In Indonesia alone, Bank Indonesia, vice president's office, Ministry of Finance and synergized to formulate 6 pillars in financial inclusion as a national strategy, among others (Bank Indonesia, 2013).

Financial education. It aims to increase knowledge and financial literacy for the community and improve the capability of the community in managing finance. Public financial facilities. This pillar is a strategy to improve the government's ability to provide public supporting facilities and facilities such as empowering MSMEs, subsidies and social assistance, and empowering communities to increase their productivity. Mapping of Financial Information. This strategy is an effort to increase community capacity from un-bankable to bankable in addressing and understanding formal financial services. Supporting policies / regulations. Rules and policies are needed to organize and corroborate every effort to initiate services and access to finance, for example through socialization policies on financial products and so on for the purpose of inclusive financial sustainability. Intermediation and Distribution Channel Facilities The strategy of this pillar aims to increase the awareness of financial institutions in addressing the distribution potential of financial service products in the community with various alternatives but still monitored with various policies, one of which is the application of the precautionary principle. Consumer protection. It aims to safeguard the community to have a sense of security in interacting with financial institutions and the use of financial products.

In addition to these pillars, Bank Indonesia also integrates the role of

technology in order to accelerate the inclusive financial sector. The role of this technology is also corroborated by Bank Indonesia Regulation number 19/12 / PBI / 2017 concerning the Implementation of Financial Technology. The aim of this financial technology integration is to encourage innovation in the financial sector by applying the principles of consumer protection and risk management and prudence in order to maintain monetary stability, financial system stability and payment systems that are efficient, smooth, safe, and reliable and easily accessed by society massively (Bank, Indonesia, 2017). The implementation of financial inclusiveness with the integration of technology in Indonesia is also fully supported by the government as reflected in the Circular Letter No. 18/22 / DKSP 2016 concerning the Implementation of Digital Financial Services as a form of follow-up of Bank Indonesia Regulation Number 11/12 / PBI / 2009 concerning Electronic Money which was later amended by Bank Indonesia Regulation Number 18/17 / PBI / 2016. These various regulations and policies reflect the existence of optimal support to implement and encourage inclusive finance.

Based on Martinez's (2016) research, content from financial inclusion in ASEAN includes ownership of financial accounts, use of financial, payment, savings, credit and financial security accounts for financial sustainability purposes. The increase in content from financial inclusion in ASEAN is indicated by an increase in the ownership of financial accounts driven by the growth of penetration in financial accounts from economic development and technological innovation, especially in mobile money. Within the scope of ASEAN, the content of financial inclusion is still dominated by Singapore, Thailand, Malaysia, the Philippines and Indonesia. This condition confirms that a country's national income classification also determines its financial inclusion role. Like Laos, Myanmar, Cambodia which has relatively national income under Singapore, Thailand, Malaysia and Indonesia also has a tendency

towards financial inclusion which tends to be low. Based on the World bank survey (2016) it was found that during 2011-2014 there was a significant increase in financial inclusion performance in ASEAN. However, around 59% of the ASEAN population in the 15+ age component is still in the un-bankable zone. But the potential and opportunities of ASEAN countries are still large in increasing financial inclusion. While financial inclusion integrated with digital or technology in ASEAN still tends to be limited, it is necessary to increase technology and financial literacy innovations to minimize un-bankable communities.

Overall, countries in ASEAN show differences in the level of progress in Digital Financial Service (DFS) policy as a manifestation of the different levels of development of the financial system (World bank and ASEAN, 2018). The majority of ASEAN countries have adopted policies and regulations for the performance of the financial sector; strengthen retail payment infrastructure; expand their ID system (to facilitate customers in identifying the financial sector); and set the regulatory framework for services such as e-money, crowdfunding, or online loans. The implementation of financial inclusion must also be supported by financial infrastructure so that the implementation and application can be carried out easily. Strengthening the financial sector supporting infrastructure sectors such as microfinance, penetration of credit bureaus or gross payment systems and retail infrastructure is very important so that the achievement in financial participation can be achieved effectively and efficiently. Various regions in ASEAN have made improvements to the development of DFS, including activating a framework for payment terms; widespread use of electronic money; and accompanied by regulations on the use of

agents by banks and non-banks. However, this effort is also inseparable from the challenges faced due to the lack of several components in promoting financial inclusion through DFS, so that there needs to be a synergy of better national strategies to improve financial inclusion and economic digitalization. In addition, there needs to be strong regulatory capacity related to the handling of the evolution of financial services and risks that may arise with innovation and new business models, infrastructure improvements, and increased financial literacy which are the basic foundations for building a community mindset to understand financial institutions (World bank and ASEAN 2018).

In Wang'oo's (2008) study that access and financial services not only contribute to income growth and poverty reduction, but also can help realize the components Millennium Development Goals (MDG's)such as improving education, gender equality and health. In terms of gender equality, access to finance also provides equal opportunities for all women and men to determine their economic destiny and improve their welfare. The financial market does not provide conditions that discriminate as well as an easy form of policy to improve banking services and access.

In addition, banking products on the financial market also provide opportunities for those who have attractive investment opportunities without looking at the size of business, ownership, profitability, income, wealth, education, gender or other personality characteristics. So that the main purpose of using financial services to minimize inequality and increase development through expanding opportunities is also very relevant to be applied (Wang'oo, 2008). This research is also supported by the results of the Mwaitete and George Study (2018) which found that there was a strong positive relationship between financial and economic inclusion of Tanzania. Access and financial services in the form of loan products

and credit for access to productivity with the aim of producing production output directly will drive real GDP which reflects a country's economic growth. The increasing percentage of financial inclusion will reflect a certain percentage in increasing GDP. This result is in line with the results of this study that when services occur and access to finance directed at productive uses will increase GDP as a reflection of economic growth.

CONCLUSION

Based on the estimation results and discussion it can be concluded that in ASEAN countries, financial inclusion contributions are able to provide a positive influence on economic growth in the long run. This is confirmed by the estimation results on the VECM estimation which shows a significant probability of the number of ATMs and commercial bank branches against real GDP in ASEAN. In addition, the success was also driven by the government's success in boosting the level of financial literacy (ADB, 2015), thereby increasing public awareness, especially for those who were still in the un-bankable category in accessing financial services. This financial use is also driven by the productive sector which begins to increase its accessibility to the banking sector through the credit sector so that the role of the financial sector in encouraging real sector activities can increase aggregate output which leads to an increase in real GDP.

However, the performance of the financial sector, which is offset by the increase in economic growth in ASEAN, would be better if it was offset by a massive decline in poverty levels in ASEAN countries so that this could reduce inequality which is still seen prominently in ASEAN countries. This led to the classification of countries in ASEAN such as Singapore and Malaysia belonging to

developed countries, then Indonesia Philippines Thailand and Brunei Darussalam belonged to the middle to upper income countries. Between Vietnam, Myanmar, Laos and Cambodia are still classified as low-income developing countries. This needs to be a concern because in creating a prosperity it is necessary to prioritize inclusive growth that not only improves the performance of certain sectors, but also all sectors in general so that inclusive growth will be created.

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