HOLISTICA Vol 13, Issue 2, 2022, pp. 63-82 DOI:10.2478/hjbpa-2022-0015

THE IMPACT OF FINANCIAL INCLUSION ON NATIONAL DEVELOPMENT AND NATIONAL FINANCIAL SYSTEM STABILITY

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Received: June 2022 | Revised: October 2022 | Accepted: December 2022
Please cite this paper as: Ratnawati, K., Prabandari, S. P., Kurniasari, I. (2022) The impact of financial inclusion on national development and national financial system stability, *Holistica Journal of Business and Public Administration*, Vol. 13, Iss. 2, pp.63-82

Abstract

This study seeks to understand the relationship between financial inclusion, national development, and the stability of the national financial system in Indonesia. The data collected in this study is a secondary data that includes the data of the number of commercial bank accounts, number of commercial banking service offices, number of general credits, average income, population welfare, goods and services production, and number of credits of 34 provinces throughout Indonesia, from 2015 until 2019. A dynamic statistic panel Model of the Generalized approach of Moments (GMM) is used for data analysis. The results of this research showed that financial inclusion has a significant negative influence on national development, but it can increase the national financial stability system. This is possible due to the diversity of demography, economic condition, and geographical condition in each province of Indonesia.

Keywords: Financial Inclusion, National Development, Financial Stability, Financial System

1. Introduction

Theoretically, higher financial inclusion can give an impact a better financial stability system. However, several empirical findings from prior research about financial inclusion in financial stability systems have indicated various results. Khan (2011) shows from the result of his research that there are negative and positive financial inclusion on financial

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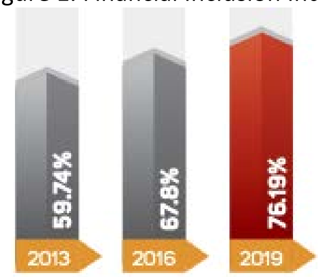
system stability. The decline in credit standards is a negative impact of financial inclusion on financial system stability as financial institutions seek to reach the lower classes, who tend not to be deposited in banks, by lowering their credit status. it can also increase the bank's reputation risk. To improve the facility of financial services, several countries had lowered the standard to establish financial institutions in rural areas. Immature and inadequate regulation by microfinance institutions can also lead to instability (Khan, 2011). Several researchers have also explained that financial inclusion does not have a significant relationship with financial system stability (Dupas et al., 2014). If the increase in financial inclusion not followed by lowering the cost of borrowing for the lower middle class as well as improving the quality of service improves then this creates oppurtunities for increased financial inclusion resulting in public confidence in financial institutions can be reduced. On the other hand, previous studies also explained that the provision of financial services which is included as a part of financial inclusion will increase economic stability (Khan, 2011) through increased domestic savings and investment (Hannig and Jansen, 2010; Prasad, 2010), and assist financial system stability through the decrease in NPL (Morgan and Pontines, 2018).

Besides affecting the stability of the financial system, the increase in the level of financial inclusion will also support national development through increasing development as well as reducing the poverty rate (Dixit and Ghosh, 2013; Burgess and Pande, 2005), reducing income inequality (Agyemang-Duah *et al.*, 2018; Park and Mercado, 2015; Park and Mercado, 2018; Neaime and Gaysset, 2018; Honohan, 2008), reducing the income gap between urban and rural community (Yang and Zhang, 2019), and improving the welfare of poor households (Brune *et al.,* 2011; Allen *et al.*, 2012; Sanjaya, 2014) in various countries. It occurs because financial inclusion that is extended to poor households, which were previously excluded from the financial system, can increase the ability to access credit and accumulate savings, thus enabling poor individuals and households to streamline consumption patterns, manage financial risks better to deal with uncertainty, and invest in productive assets (Beck *et al.,* 2005; IEG, 2015).

The impact of financial inclusion on national development through enhancing human development is reviewed (Sarma and Pais, 2011; Dwyfor Evans *et al.*, 2002), education and health (Mor and Ananth, 2014; Mishkin, 2007; Cheston and Kuhn, 2002) and long-term economic growth (Levine, 1997) has been conducted, but the numbers are still limited. All previous research about financial inclusion has adopted an aggregate measure of financial inclusion from a composite index measure that has been developed, such as the number of bank branches, number of automated teller machines, and savings accounts, which are taken from the access or component from financial system usage, as a proxy measure of financial inclusion (Neaime and Gaysett, 2018; Beck et al., 2012). It is generally understood that financial inclusion generally consists of three main dimensions or components i.e., uses, access, and quality (Jahan et al., 2019).

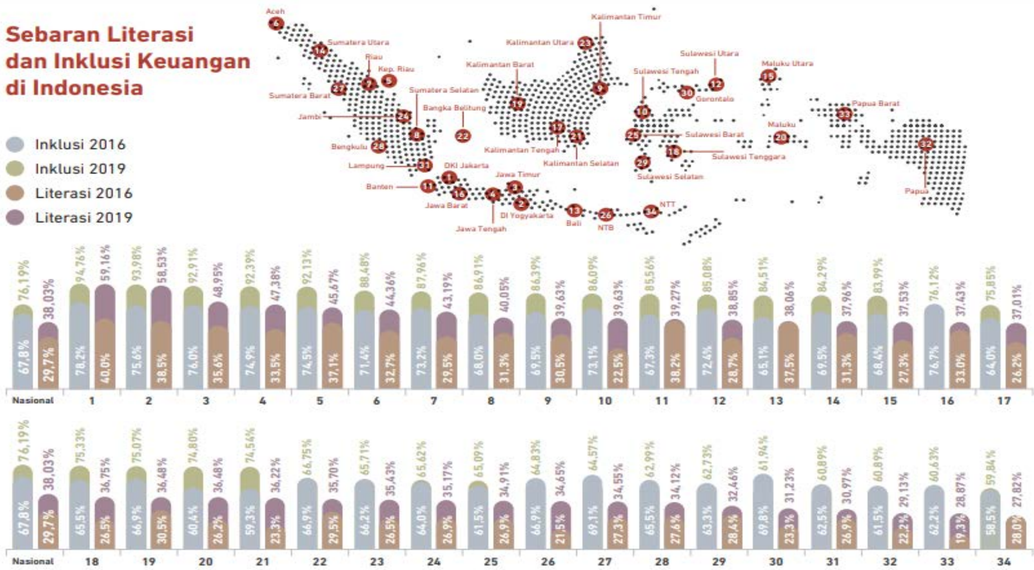
The increase in financial inclusion itself cannot be separated from the role of the Financial Services Sector (FSS/SJK) in Indonesia, as it continues to experience positive developments despite the slowdown in global and domestic economic growth over the past five years. The Financial Services Authority (FSA/OJK) is committed to increasing the role of the FSS in spurring economic growth while continuously maintaining financial system stability. This achievement is reflected in the continued maintenance of the stability of the financial system, the increase in the wealth of financial services institutions (FSI / LJK), and its role in supporting the nation's economic growth, as well as increasing financial inclusion in supporting efforts to narrow economic inequality and support equitable distribution of community welfare.

Figure 1. Financial Inclusion Index of Indonesia



Source: ojk.go.id, 2020

Figure 2. Distribution of Financial Literacy and Inclusion in Indonesia



Source: ojk.go.id, 2020

The result of the National Financial Literacy and Inclusion Survey (SNLIK) conducted by OJK (2019) showed that the achievement of financial inclusion in Indonesia reached 76.19% (see Figure 1). This number indicates a significant increase from the previous survey in 2016, as there was an increase in access to financial products and services by 8.39% (ojk.go.id, 2021). It is also supported by the results of the 2019 OJK SNLIK survey which involved 12,773 respondents in 34 provinces and 67 cities/districts in Indonesia, taking into account the gender and strata of urban/rural areas. Over the last five years, the level of financial literacy has reached 76.19% and the financial literacy index has reached 38,03% % (ojk.go.id, 2021) (see Figure 2) therefore, it's getting better every year. The main purpose of financial inclusion programs is to promote inclusive growth by reducing poverty, strengthening fair distribution of development or finance, and increasing the stability of the financial system. This study will describe the extent of financial inclusion in Indonesia and analyze the role of financial inclusion in contributing to national development and national financial system stability.

This article is divided into five parts. The first part is an introduction. The second part is literary studies and hypothesis development. The third part is the research method. The fourth part is results and discussions. The final part is a conclusion which includes a conclusion of research results, limitations, and recommendations for future studies.

2. Literature Review

2.1. Financial Inclusion

Financial inclusion emerged because of the post-economic crisis in 2008. The crisis was most felt by the lower-middle-income community, which in general was the unbanked community and was mostly in developing countries. Referred to Supartoyo *et al.* (2013), the World Bank (2013) argues that financial inclusion is all economic activities that have the aim to eliminate all barriers in the form of prices or non0prices to access to formal financial services consumed by the public. Bank Indonesia (2014) states that the main goals (vision) of financial inclusion are financed available in all areas to promote economic growth, reduce poverty, distribute income and promote financial system stability. He said it was to build a system.

In general, access to low-cost financial services is necessary for financial inclusion (Bhaskar, 2013), which of course will lead to economic growth and state financial stability. But now it doesn't always have a great effect in all cases (Moreotra and Yetman, 2015). Efforts to increase financial inclusion in Indonesia are carried out by developing a national strategy called the National Financial Inclusion Strategy (SNKI). This strategy was jointly developed by Bank Indonesia, the Deputy Governor's Office (National Team for Poverty Reduction Promotion / TNP2K), and the Ministry of Finance. The SNKI consists of 6 pillars (Bank Indonesia, 2013), i.e financial education, public financial institutions, attribution of financial information, support policies/regulations, efficiency-enhancing institutions and distribution channels, and consumer protection.

There are three aspects to calculate financial inclusion indexes by Sarma (2012), that is bank penetration, availability of banking services, and use of banking services. Bank penetration is the utilization of as many users as possible of a comprehensive financial system. The measure of banking penetration is the size of the population that has access to banks, such as the proportion that has a bank account. The dimensions of the availability of financial services include the number of outlets (branch offices, ATMs, etc.). The availability of services can indicate by services given to financial institutions through the number of branches or ATMs in that region. With the existence of branch offices and ATMs, the public can easily access financial services. But in several countries, society has used mobile banking and internet banking to ease access to financial services. The dimension of the use of banking services refers to the individuals who take advantage of the existence of financial services. However, not all the society level uses the existence of financial services. This might happen due to several reasons, including being far from bank outlets or having bad experiences with the service providers. Therefore, ownership and use of an account can indicate the inclusive financial system. This includes credits, deposits, payments, remittances, and transfers. Financial inclusion can be measured by access, use, quality, and welfare, whereas access refers to the availability of financial products and services. Usage is the utilization of various products and services by households and businesses. Quality refers to the ability of a financial institution to give the product or service to the consumers' needs.

2.2. National Development

Development can be interpreted as a collaborative effort to create a more legitimate alternative for every citizen to meet and fulfill his most human needs (Nugroho and Dahuri, 2004). Based on the purpose of the fourth paragraph preamble of the 1945 Constitution, National development is one of the efforts to achieve the goal of a just, prosperous and prosperous society. In line with this goal, various national development activities are directed at equitable development for each region, especially areas that tend to still have weaknesses in receiving their income (Azzumar, 2009). The activities of national development cannot be separated from the participation of local governments in utilizing the resources available in their respective regions to increase regional capabilities. For this reason, the increase must be supported by regional development that is carried out in a harmonious and integrated manner to realize national development (Arsyad, 1997).

National development can also be interpreted as a deliberate economic, social, and cultural transformation through policies and strategies toward the desired direction. The transformation in the economic structure, for example, can be seen through the increase of rapid production growth in the industrial and service sectors, thus its contribution to the national income is getting bigger. On the contrary, the contribution of the agricultural sector will become smaller and inversely proportional to the growth of industrialization and economic modernization. Social transformation can be seen through the distribution of wealth of equitable access to socio-economic resources, such as education, health, housing, clean water, recreational facilities, and participation in political decision-making processes. Meanwhile, cultural transformation is often associated with the rise of the spirit of nationalism, in addition to changes in values and norms adopted by society, such as changes from spiritualism to materialism/secularism. It is also associated with the shift from high judgment to material mastery, from traditional institutions to modern and rational organizations. Every country has different indicators and variables of national development. In poor countries, the standards of progress and development are more focused on the fulfillment of basic needs rural electricity, and rural health services. Whereas in developing countries, the country more focuses to fulfil on the secondary and tertiary factors of national development indicators.

2.3. National Financial Stability

Financial stability is the alternate of the financial system together with economic markets, monetary intermediaries, and market infrastructure so that the economic machine can resist sufficient economic surprise to destabilize the economic system (Natolyevna and Ramilevna, 2013). In other words, the definition of financial stability is closely linked to risk mitigation and shock resilience. According to Bank Indonesia (2013), a stable financial system is a financial system that is strong and resistant to various economic disturbances, so that it is still able to carry out intermediation functions, carry out payments, and spread risks properly. Financial system stability is an important system in a country, but it is not the end goal or the finish line. A stable financial system will make the market process better, control the money circulation, and encourage the real sector, thus it will make the economy better. In achieving this, the intermediation function of the financial sector has an important role to play in increasing economic growth, equalizing people's incomes, reducing poverty, and maintaining financial system stability. However, the fairly rapid development of the financial sector has not been matched by adequate access to financial services. One of the important conditions in the economic system stability is access to adequate financial services (Bank Indonesia, 2014).

According to Chant (2003), when the market is unstable (instability), it will cause the economy to falter, and it can lead to losses and also disrupt economic progress in the real sector, which results in a decline in people's purchasing power. It may also complicate the financial condition of the government, companies, and households, as well as cause limited cash flow. To support the argument, Nasution (2003) states that price stability is related to the financial system, wherein Price stability is an indicator of the stability of the financial sector, currencies, and the overall functioning of the financial system. Financial system instability can be caused by structural factors as well as the behavior of market participants, as these factors can come from within the country or from abroad.

In an economy, there is a financial system that consists of various institutions that function to assist the process of intermediation of savings owned by a person or institution with other people's investments. The intermediation function owned by various institutions that are members of the financial system has a role in encouraging the movement of an economy (Mankiw, 2007). The stability of the financial system in the state in which the financial system can efficiently allocate funds, withstand economic shocks, and support economic growth. One of the strategies to promote economic growth to build a stable financial system is financial inclusion and movement of the overall economic growth rate (Awanti, 2018).

2.4. Hipotesis Development

2.4.1. Financial Inclusion and National Development

Beck and Demirguc-Kunt (2006) argued that access to finance enables SMEs in developing countries to make productive investments to expand their business and acquire the latest technologies, thereby ensuring business competitiveness and encouraging innovation, which in turn has an impact on GDP growth. This is supported by Aghion and Bolton (1997) who argued that more credit means more entrepreneurship, more company formation, and economic growth. A study conducted by the World Bank (2013) also showed that access to finance through the provision of credit to companies will Improve business performance and business growth by facilitating market entry, mitigating risk, promoting, innovation, and expansion of business in developing countries. On the other hand, sales growth becomes an antecedent for firm performance, and financial inclusion is closely related to firm performance as one of the internal resources for the company. Financial inclusion has brought great value to financially constrained businesses, as companies in developing countries do not have access to credit from traditional financial systems.

There are two aspects to accessing credit as a key determinant of a company's revenue growth. First, access to finance can increase the revenue from the company. That argument was proved by Brown et.al., (2005) in their research using panel data from Romanian companies, which found that access to external credits has a significant impact on sales growth. The second aspect, access to finance can support business growth. Gopalan et al. (2011) also found that to obtain a large number of bank loans, businesses need to build good relationships with banks, especially small businesses. Based on these discussions, companies determine the need for external funding related to the level of sales. SMEs cannot bear the risk of inadequate funding. As a result, SMEs maintain close ties with banks to improve funding conditions. In addition, the results of a study by Sakonko et al. (2019) point out that there is a long-term link between financial inclusion (banking, ATM, access to credit) and national development. In addition, the short-term ARDL results show that even though admittance to ATMs and last year’s FICO ratings impact public turn of events, the upside of public improvement in the previous year, admittance to bank and ATMs, and access to banks have a significant negative influence on national development in the short term. It is also supported by the results from Van and Linh (2019) which showed that there is a correlation between a large number of bank branches, ATMs, and domestic credit in the private sector and an increase in the development rate. Gul, Usman, and Majeed (2018) in their concentrate likewise uncovered that monetary consideration, which is estimated by responsibility for accounts, bank offices, number of AYMs, and extra security affects financial development in 185 nations.

National development can be defined as quality improvement in various fields of national life such as the political, ethical, socio-psychological, and economic fields of national life, which combine to describe and guarantee a quality and productive existence for citizens of a nation or country. Okoye *et al.* (2017) used the OLS technique to determine the influence of financial inclusion on economic growth and development in Nigeria during the period 1986 to 2015. Another research also found that financial inclusion significantly impacts economic growth and poverty reduction in Nigeria from 1982 until 2012 (Onaolapo, 2015); and can decrease income inequality in 37 developing countries in Asia (Park and Mercado, 2015). That study shows that income in keeping with capita, the rule of regulation, and demographic characteristics have a robust correlation with economic inclusion in developing nations (Park and Mercado, 2015). Tiwari *et al.* (2013) stated that providing financially disadvantaged families with low-cost loans and increasing access to various sources of funding, which are used for business growth can lead to poverty reduction and job creation (Davidsson *et al.*, 2010). Overall, previous studies tend to serve as logic for linking indicators of financial inclusion to the development of countries that lead to economic growth. Based on these explanations, the hypothesis of this research is:
Hypothesis 1: *Financial inclusion influences national development*

2.4.2. Financial Inclusion and National Financial Stability

The high level of financial inclusion shapes the financial system, as the increased share of the formal financial sector, also strengthens the use of interest rates as a primary key policy tool and has a positive impact on macroeconomic stability (Cecchetti and Kharroubi, 2012). Morgan and Pontines (2018) found in their research that increasing lending to small and medium-sized enterprises can increase financial stability, reduces non-performing loans (NPL) and reduces the likelihood of financial institutions going bankrupt. Hannig and Jansen (2010) in their study stated that in addition to being able to overcome income inequality, financial inclusion also has the potential to improve financial stability. This is a financial institution that has inadequate access to savings from formal financial institutions and increases household opportunities to deal with financial vulnerabilities caused by the negative effects of the crisis and mitigating shocks during a global crisis. This is because the financing base of the household will be diversified and the resilience of the economy will increase. By accelerating growth, promoting diversification, and reducing poverty.

A study that explains the risk of instability due to the increase in financial inclusion is conducted by Lopez and Winkler (2019) used 189 countries' samples from 2004 until 2017 to show that countries with the high financial inclusion are less likely to be disadvantaged by a market decline in credit and lending. Dupas et al. (2014) in their research also found that improving banking services does not improve financial stability, as it does not involve lower borrowing costs in the lower-middle-class community, lack of trust, and is not followed by an increase in service quality in the western province of Kenya. Low-interest deposits will increase and reduce the marginal cost of funding when banks adopt an inclusive financial system (Ahamed and Mallick, 2019).

Dabla Norris et al. (2015) have developed in their research that an equilibrium model can explain the constraints of financial inclusion, including GDP, non-performing loans, and inequality among enterprises in six countries in Asia and Africa with different levels of economic development. Other studies also found that financial inclusion can reduce income inequality, and also has a positive impact on financial stability in Tunisia, Libya, Egypt, Yemen, and Syria (Neaime and GaySet, 2018; Linyang, 2018) because financial inclusion can give motivation for poor households to make improvements their economic condition (Linyang, 2018). Based on the literature, the hypothesis of this study can be formulated as:

Hypothesis 2*: Financial inclusion influences the efficiency of national financial system stability.*

3. Research Method

This study uses secondary data provided by the World Bank Database, the International Monetary Fund (IMF), the ChinnIto Database, the Federal Reserve Economic Database (FRED), CEIC database, Cesifo database, Bank Indonesia, Central Bureau of Statistics (BPS), and Financial Services Authority (OJK). The authors also use additional literature from books, journals, and other previous studies.

The population used in this research is all provinces in Indonesia. Since the sampling method used in this survey is saturated samples, the sample size for this survey is 34 states in Indonesia. Saturated samples are used because there are only 34 states in Indonesia. The study period is 5 years; hence it is hoped that it can better describe the condition of the population of provinces in Indonesia. Hypothesis testing used a dynamic generalized method of moments (GMM) data panel model, following the study from Ratnawati (2020), Rioja and Valev (2004), Beck *et al.* (2007a, 2007b), and Neaime and Gaysse (2018). The conditions for a powerful board information model for estimating the effect of monetary incorporation on the improvement of a nation and the solidness of the country’s monetary framework are:

$$Z_{it} = \alpha_i + \sum_{j=1}^{p} \varphi_j Z_{it-1} + \sum_{j=1}^{N} \gamma_j X_{jit} + \sum_{k=1}^{L} \beta_k Y_{kit} + \varepsilon_{it}$$

Details:
Y = Vector of an independent economic variable
Z = Proxy for variables of financial inclusion, national development, and national financial system stability

α_i = Unobserved fixed effect
ε_{it} = Independently distributed error rate

The equation to look at the influence of banking entrance, get right of entry to banking services and use of banking services in encharging the country wide economic gadget balance is as follows:

$$\text{STAB}_i = a + \sum_{j=1}^{N} b_{ij}\boldsymbol{X}_{ij} + \sum_{k=1}^{L} c_{ik}M_{ik} + \varepsilon_i$$

Details:

I	= Cross-provincial unit
STAB	= Proxy for national development and national financial system stability
X	= Proxy for financial inclusion variable
M	= Factor vector associated with Province i
a, b_j, dan c_k	= Parameter
ε_i	= Error rate

To avoid the problem of multicollinearity, the model is estimated using the linear model GMM estimation procedure in the context of panel data. The model estimation procedure takes into account the nature of the AR (1) autocorrelation within the panel, as well as the cross-sectional correlation and heterogeneous variance between the panels.

3.1. Variables Measurement

This study consists of dependent and independent variables. There are two dependent variables in this study, namely national development (Y1) and national financial system stability (Y2), while the independent variable in this study is financial inclusion (X1). The measurements used in each variable are as follows:

3.1.1. Financial Inclusion

In this study, financial inclusion variables are measured using three indicators adopted from Sarma (2012): bank penetration, access to banking services, and use of banking services. Banking penetration is the ratio of the number of accounts in commercial banking per 100,000 population, and it is calculated by the equation below:

$$X_{1.1} = \frac{\text{Number of commercial bank customers (year t)} \times 100.000}{\text{Total Population (year t)}}$$

The second indicator, namely access to banking services, is the ratio of the number of commercial banking service offices per 100,000 population, and it is calculated by the equation below:

$$X_{1.2} = \frac{\text{Number of offices (year t)} \times 100.000}{\text{Total population (year t)}}$$

The third indicator, namely the use of banking services, is the ratio of the amount of general credit extended by commercial banks to the Gross Regional Domestic Product (GRDP) in billions of rupiah, which is calculated by the equation below:

$$X_{1.3} = \frac{\text{Number of general credit (year t)} \times 100\%}{\text{GRDP value (year t)}}$$

3.1.2. National Development

National development indicators are differently measured in every country. Indicators that are used to measure the development of poor countries tend to include measures of progress development focused on basic needs, but in countries that have been able to meet these needs, indicators shift to secondary and tertiary factors such as per capita income (GNP or GDP) and economic structure. The indicators of national development used in this study are GNP (Y1.1), Human Development Index (HDI) (Y1.2), and GDP (Y1.3). GNP is the ratio of the average income of a region before tax, calculated by the equation below:

$Y_{1.1}$ = Consumption (C) + Investment (I) + Government (G) + Net Exports (NX) + Net Foreign Factor Income (Factor payments from abroad – Factor payments to abroad)

HDI (Y1.2) is a social and economic ratio that measures the welfare of the population of an area, calculated using the equation below:

$Y_{1.2}$ = 1/3 (Life expectancy index) + Education index + Decent standard of living index

The indicator of GDP (Y1.3) is the overall ratio of all goods and services produced in the region within a certain period, calculated using the following equation:

$$Y_{1.3} = \frac{\text{GNP of year t}}{\text{Total population (year t)}}$$

3.1.3. National Financial Stability

National financial stability in this study is measured by macroprudential indicators (Aggregate) according to Mankiw (2007), namely Non-Performing Loan (NPL) (Y2). NPL (Y2) is a ratio that shows a situation where the customer is unable to pay part or all of his obligations to the bank for the loan made as agreed. The NPLs used include substandard loans, bad loans, and doubtful loans, which are calculated by the equation as follows:

$$Y_2 = \frac{\text{Bad Credit } \times 100\%}{\text{Total Credit}}$$

4. Result and Discussion

4.1. Result

4.1.1. Descriptive Statistic

The analysis results of the variable of financial inclusion and the dependent variable of national development and financial system stability are shown as follows. Referring to the results of descriptive data analysis in Table 1, from the research period 2015 – 2019, it can be known that the variable of financial inclusion which is proxied by banking penetration and access to banking services has a standard deviation value below the average value. This condition explains that the data on banking penetration and access to banking services are less varied, or that banking penetration and access to banking services have a low level of data variation.

Table 1. Results of Descriptive Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Banking_Penetration	170	376014.79	43372333.96	8600025.63	8065298.478
Access_to_Banking_Services	170	63.49	5072.61	1159.16	1057.02
Use_of_Banking_Services	170	2.02	406.61	43.99	48.40
GNP	170	10064.00	2582607.00	387557.74	554200.79
HDI	170	57.25	80.76	69.78	4.12
GDP	170	0.00	0.25	0.05	0.05
NPL	170	74.00	63315.00	3632.59	9642.61
Valid N (listwise)	170				

Source: Processed Data, 2021

On the other hand, the variable of financial inclusion proxied by the use of banking services has a standard deviation value above the average value. This explains that the data of the use of banking services vary, or that the use of banking services has a high level of data variation. The data of the variable of national development proxied by GDP and HDI has a standard deviation value below the average value. This means that the GDP and HDI do not vary, or that the GDP and HDI have a low level of variation. Furthermore, the data of the variable of national development proxied by GNI/GNP has a standard deviation value above the average value of the GNI/GNP. GNI/GNP has a high level of data variation. Data on financial system stability variables proxied by NPL has a standard deviation value above the average value of NPL, thus it means that NPL data varies, or that NPL has a high level of data variation.

4.1.2. Classical Assumption Test

Before the hypothesis testing in this study is carried out, it is necessary to test the classic assumptions as prerequisites that must be met before performing multiple linear regression analysis. Classical assumption tests were used in this research i.e. normality tests, heterogeneous dispersity tests, and autocorrelation tests. The results of the normality test in this study indicate that the overall test data has a significant value of ≥

0.05, therefore, the data is normally distributed and suitable for multiple regression testing. This research used the Glejser method as the heteroscedasticity testing. The principle of the test is to regress the independent variable to the absolute residual value. The results of the non-uniform variance test show that the total significance of the test data is 0.05, thus the data can be said to have no heteroscedasticity symptoms and are eligible for multiple regression testing. The last classic assumption test is the autocorrelation test. The autocorrelation test is used to determine the relationship between the occurrence of time-sorted samples of members.

Table 2. Results of Autocorrelation Test

Model Summary[b]

Model	Durbin-Watson
1	2.112[a]
2	1.932[a]

a. Predictors: (Constant), Financial Inclusion

b. Dependent Variable Model 1: National Development

c. Dependent Variable Model 2: National Financial System Stability

Source: Processed Data, 2021

The results of the autocorrelation test showed that the Durbin-Watson Model 1 value is 2.112. Referring to the Durbin-Watson table, with the number of variables being 1, and the number of samples being 34, the dL value is 1.3929 and the dU value is 1.5136. Based on the Durbin-Watson value and the Durbin-Watson table between dU and 4-dU (4 – 1.5136), then the Durbin-Watson value is 1.7792 < 2.112 < 2.4864. Furthermore, the Durbin-Watson Model 2 value is 1.932. Referring to the Durbin-Watson table, with the number of variables being 1, and the number of samples being 34, the dL value is 1.3929 and the dU value is 1.5136. Based on the Durbin-Watson value and the Durbin-Watson table between dU and 4-dU (4 – 1.5136), then the Durbin-Watson value is 1.7792 < 1.932 < 2.4864. Therefore, the research data of Model 1 and Model 2 are free of autocorrelation.

4.1.3. Hyphotesis Testing

Hypothesis testing is performed after the study data has been declared classically good. The regression test in this study is carried out in two stages, namely hypothesis testing for model 1 (H1) and model 2 (H2).

Table 3. Hypothesis Test of Model 1 (H1)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.126	.038		-3.283	.001
	Financial Inclusion	-.371	.044	-.541	-8.346	.000

a. Dependent Variable: National Development

Source: Data Primary, 2021

The results of the hypothesis testing of model 1 (H1) show that the probability (Sig.) for the constant is 0.001 ≤ 0.05, thus indicating that when there are no other variables in this study, the value of national development is -0.126. The results of hypothesis testing for the influence of financial inclusion (X) on national development (Y1) also show that the probability (Sig.) is 0.000 ≤ 0.05, therefore H1 is **accepted** (Table 2). The value in beta 1 (β1) = – 0.371, which means that if financial inclusion (X) decreases by 1 unit, then national development (Y1) will decrease by – 0.371, Suppose the other independent variable is a constant or no other independent variable. In other words, the results of this test explain that financial inclusion (X) has a negative and significant impact on national development (Y1).

The results of the hypothesis testing of model 2 (H2) showed that the probability (Sig.) for the constant of model 2 (H2) is 0.001 ≤ 0.05, thus indicating that when there are no other variables in this study, the value of national development is 737.258. The results of hypothesis testing for the influence of financial inclusion (X) on national financial system stability (Y2) also show that the probability (Sig.) is 0.000 ≤ 0.05, therefore H2 is **accepted**. The value in beta 1 (β1) – 242.644, which means that if financial inclusion (X) decreases by 1 unit, then the national financial system stability (Y2) will decrease by – 242.644, assuming that other independent variables are constant, or there are no other independent variables. In other words, the results of this test explain that financial inclusion (X) adversely affects the stability of a country's financial system (Y2) and has a significant impact.

Table 4. Hypothesis Test of Model 2 (H2)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	737.258	23.190		31.791	.000
	Financial Inclusion	-242.644	26.788	-.573	-9.058	.000

a. Dependent Variable: National Financial System Stability

Source: Data Primary, 2021

4.2. Discussion

4.2.1. Financial Inclusion and National Development

The results of this study explain that financial inclusion (X) has a negative and significant impact on national development (Y1). The results show that financial inclusion impede the development of the country, which is measured by several indicators such as GNP, HDI, and GDP. In other words, financial inclusion in every province in Indonesia will reduce the average provincial income and reduce the welfare of the community. This possibility occurs because the data used are provincial in Indonesia, which is as many as 34 provinces. Each province in Indonesia has diverse conditions, both in terms of geography, demography, and community welfare. The understanding of financial inclusion in Indonesia tends not to be used for productive needs such as business and transactional financing activities, but it is still limited to saving money. Although many strategies have been carried out to increase financial inclusion in every province in Indonesia, it would still tend to reduce national development if some communities in each province do not use or are less interested in the financial inclusion program for productive activities. It can be influenced by the condition of the people in each province which has a diverse economic structure.

The existence of different social classes in each province also affects the province's per capita income, and the per capita income has an impact on national development. It is known that there are still many people in every province in Indonesia who come from the lowest social. On average, people from these social classes tend to not pay attention to what financial inclusion is, and even its goals and benefits. Therefore, it is not surprising that increasing financial inclusion will reduce national development in each province. Not only, are there social classes in every province in Indonesia but also the majority of the society in Indonesia is a Muslim, so they believe when they get access to finance from credit is a riba because of the interest rate (Prabowo et. al., 2021). Although access to finance from credit is allowed in Islam, as long as it doesn't use interest rates, only a few people use sharia finance. Therefore, so many people in Indonesia prefer doesn't take financial facilities such as credit, when they establish their business.

The linkage of the influence of financial inclusion on national development through GNP and GDP can be seen in how Indonesian MSMEs gain access to business financing. Currently, many programs are being raised to provide access to business financing to MSMEs and to support strategies to increase financial inclusion in every province in Indonesia. However, there are still several MSME owners in each province who do not use the financing facilities. This is because many MSMEs tend to use internal funding to support their business continuity. One of the factors that cause these problems is that many MSME owners have problems with financial records and business cash flows, hence they do not meet the requirements to access business financing facilities. Sandi (2019) stated that the survey results from Pricewaterhouse Coopers showed as many as 74% of MSMEs in Indonesia had not had access to financing. This identified credit constraint reduces our ability to obtain external funding, thereby reducing revenue growth. When MSMEs have difficulty in obtaining financing through business loans, this will affect business operations, and will later affect sales growth, which will then have an impact on the growth of GNP and GDP in each province. Dimitrov and Tice (2006) have shown that a credit crunch, whether bad credit or recession, can cause businesses to experience lower revenue growth rates. Calcagnini *et al.* (2014) in their study also found that the existence of guarantees easily allows companies to access credit, especially to reduce payment costs. Therefore, the results of this study are not in line with several previous studies which explain that financial inclusion has an important role in influencing national development (Van and Linh, 2019; Okoye *et al.,* 2017; Onaolapo, 2015; Aghion and Bolton, 1997; Kevane and Wydick, 2001).

4.2.2. Financial Inclusion and National Financial Stability

The results of this study explain that financial inclusion (X) has a negative and significant influence on national financial system stability (Y2). Besides being able to decrease national development, financial inclusion is also able to increase national financial stability by lowering the NPL rate. This shows that financial stability can withstand shocks in the economy and able to encourage economic growth with the role of financial inclusion. This is possible because there is an influence of increased access to financial services for MSMEs that is illustrated through increased business loans, therefore, it is possible to lower the level of non-performing loans (NPL) of financial institutions. In addition, high levels of financial inclusion may encourage the participation of various economic sectors in the formal financial system as the share of the formal financial sector increases, it also does increase the use of interest rates. The research found that if banks adopt a comprehensive financial system to increase savings at low-interest rates, the bank can benefit from financial inclusion to reduce marginal financial costs and increase pricing power (Mallick, 2019). Moreover, Khan (2011) stated the negative impact of financial inclusion arises because financial inclusion can lower the credit standard. It occurs for the reason that economic group tries to reach the unbanked lower elegance by way of reducing mortgage phrases. It also can increase the risk of bank reputation due to increasing financial service facilities in some countries which lowers the standard for establishing a financial institution for rural areas.

Increasing ownership of banking accounts by the general public because enhancement of financial system stability which infuenced by financial inclusion. This strengthens the previous studies conducted by Hannig and Jansen (2010) which explained that access of the poor to formal savings by financial institutions can increase budget capacity to address financial vulnerabilities caused by the negative effects of the crisis. Therefore, by accelerating growth, promoting diversification, and reducing poverty, economic resilience can be increased. The study from Dupas *et al.* (2014) inside the western province of Kenya also said that an increase in banking service does no longer cause balance enhancements as decrease middle magnificence borrowing prices do not stay reduced, lack of agree with, and now not observed through growth in carrier exceptional. Therefore, it can be concluded that financial inclusion has a major influence on bank stability.

5. Conclusion, Limitation and Future Research

This study explains the linkage between financial inclusion and the economy in Indonesia which is elaborated in detail through the relationship between the variables of financial inclusion, national development, and financial system stability. The results show that financial inclusion will reduce national development in every province in Indonesia. This possibility occurs because the data used are provincial, as there are 34 provinces in Indonesia with various conditions of economics, demographics, and people's welfare in each province. The existence of different social classes in each province also affects the province's per capita income, and the per capita income has an impact on national development.

This study also illustrates that financial inclusion has a significant influence on financial system stability through increased business loans, thereby it can lower the level of NPL of financial institutions. Larger financial inclusion increases using hobby charges as the percentage of the formal economic region will increase, as a result promoting extra participation of the various monetary sectors in the formal economic gadget. This study suggests increasing the level of financial inclusion to be higher, even if the current level or condition is already good. This is due to the existence of several MSMEs that still experience business financing credit constraints. In addition, the diversity of community conditions in each province in Indonesia must also be considered, so that the strategy to increase financial inclusion can be achieved according to the target and can have an impact on national development and economic growth. Policymakers ought to increase accessibility and hold the steadiness of national financial system for the country so that it will resist economic shocks and encourage financial growth.

There are several limitations of this study. The first one is that the indicator used to measure national development is only based on the data of GNP, HDI, and GDP, while the measure of national financial stability is only based on the data of NPL. Second, this study only examines the influence of financial inclusion on national development and national financial stability. Future research can add different indicators to measure national development and national financial stability. Other variables that can influence national stability and financial system stability should also be added because the data for national development in 2019 showed negative growth.

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