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The Impact of Financial Inclusion and Financial Technology on Economic Growth in Indonesia

Jhoni Lumintang[1], Idah Zuhroh[2], Firdha Aksari Anindyntha[3]

Abstract :

Economic growth is one of the important aspects that is of concern because it is connected to the welfare of the community and the state of a good economy, where the financial sector plays an important role in increasing economic growth. The objective of this research is to examine the effects of financial inclusion and fintech on Indonesia's economic growth. Data processing analysis in this researc using panel data regression. The results of the saving accounts and the amount of commercial bank lending have a positive and significant effect on, bank offices has a negative insignificant effect and fintech lending has a positive insignificant and effect on economic growth. To encourage economic growth, banking service providers distribute funds to the public and all industrial sectors and innovate on products and make efficiency in their services as well as analyze every risk, and for fintech companies to educate and introduce digital financial products to every element of society.

Keywords: *Saving Accounts, Commercial Bank Lending, Bank Offices, Fintech Lending*

1. Introduction

Economic growth is one of the issues that has always been discussed around the world. Economic growth is an indicator that shows the economic conditions and circumstances of a country. The economic growth is also a process that is being experienced by the country in relation to conditions that are better than before (Lucas & Landman, 2021). In the 17 elements for sustainable development in the Sustainable Development Goals (SDGs) promoted by the United Nations, sustainable inclusive economic growth and decent and productive employment opportunities are elements of the 8th SDGs (Anindyntha, 2023; Fioramonti et al., 2022). This economic growth is closely related to the welfare of society, which in turn is an indicator that a country is in a good economic condition category (Tirumala & Tiwari, 2022).

It cannot be denied that currently the economic growth of a country is very important because it will be an aspect that always gets serious concerns for the country (Segura & Zamar, 2021). Indicators of economic growth are assessed through the growth rate of Gross Domestic Product (GDP) because a country's GDP measures the amount of value added generated by its production capacity (Anindyntha, 2023). (Zuhroh, 2022) also explained that economic

[1] *Faculty of Economics and Business, University of Muhammadiyah Malang, Indonesia.*
jhonilumintang2@gmail.com
[2] *Faculty of Economics and Business, University of Muhammadiyah Malang, Indonesia.*
idah@umm.ac.id
[3] *Faculty of Economics and Business, University of Muhammadiyah Malang, Indonesia.*
firdhaaksari@umm.ac.id

indicators have a strong relationship if there is a crisis, especially in economic growth and inflation. In addition, political stability contributes to economic growth (Abdillah et al., 2020). As one of the emerging economies that continues to advance economic development and the welfare of society, Indonesia always strives to increase and encourage economic growth every year. As there is considerable economic growth, this can attract investors or provide an impetus for capital investment which will ultimately result in the creation of new jobs and an increase in per capita income and reduce poverty. In addition, the government will also implement policies and undertake developments that can encourage economic activity to be faster than before.

Depending on information released by the Badan Pusat Statistik (BPS) in 2018 Indonesian economic growth was quite high at 5.17 percent. Then entering 2019 Indonesia's economic growth of 5.02 percent experienced a slowdown. In 2020 Indonesia's economic growth experienced a slowdown of -2.07 percent, this occurred due to the COVID-19 outbreak pandemic which hit the whole world and stopped all activities which had an impact on reducing global economic growth. After falling to a minus number, Indonesia's economic growth in 2021 returned to positive numbers and increased by 3.70 percent. And then in 2022 economic growth in Indonesia has increased by 5.31 percent.

Of the several sectors, the financial sector is one that has an impact on economic growth (Irmayasari & Adry, 2020). Financial sector development can promote economic expansion, this is due to increased access and utilization of banking services by the community (Cheng & Degryse, 2010; Sarwar et al., 2021). An indication of the creation of quality economy development is a stable financial system in realizing financial inclusion and the benefits can be felt by every element of society (Anindyntha, 2020).

Bank Indonesia (2014) explains that financial inclusion is a strategy for national development that aims to increase the economic growth through equal distribution of income, alleviate poverty, and stabilize the financial system. Pearlman et al. (2020) defines financial inclusion as a process of individual households or businesses having an access on financial goods and services, which in turn will be one of the factors in enhancing financial growth. The definition of a financial inclusion also referred to broad access to different types of services at a reasonable price (Ouma et al., 2017; Swamy, 2014; Zins & Weill, 2016). Financial inclusion is related to inclusive growth, because as people have easier access to formal financial facilities with financial inclusion as an intermediary, it can increase inclusive growth (Prabowo et al., 2023). Financial inclusion is supposed to raise growth rates by ensuring that funds can be allocated for economic and investment purposes in a region (Sophia et al., 2023).

A fairly explicit strategy to increase the acceleration of economic growth is through financial inclusion, this is something that is considered important for the achievement of inclusive growth of a country because every policy maker focuses on the availability of financial services because financial services themselves have implications for economic and social aspects (Sophia et al., 2023). Erlando et al. (2020) states that financial inclusion can positively impact economic growth, which in turn can reduce poverty. This can happen because inclusive finance is capable of reduce poverty by channeling capital, inequality can also be reduced by inclusive finance by equalizing income distribution (Pramaswara & Athoillah, 2023). One of the government's policy goals is the realization of financial inclusion which is a way to trigger growth in the economic because banks have a role in increasing the level of savings through the breadth of outreach to the community, the allocation of credit is intended as investment or consumption which in turn is able to have an impact on economic growth by increasing output and GDP in a country (Ratnawati, 2020).

Economic growth is not only influenced by financial inclusion level, the technology we currently use is also able to have an impact and influence. The theory of economic growth put forward by Robert M. Solow in the Solow Model states that the economic growth is affected by agglomeration of capital in the form of investment, consumption, and savings as well as the amount of labor covering the population, and technological developments will have a positive effect to economic growth (Mankiw, 2016). Financial technology or often called fintech is a form of improvement from the development of technology. Simply put, financial technology is a breakthrough in financial services that provides convenience and supports the faster circulation of money (Narastri & Kafabih, 2020). In its operation, fintech is enough just to run the application on the user's cellphone. In addition to providing convenience in the transaction process, fintech is able to provide services or services that have also been available in formal banks including distribution and provision of credit which in its application fintech has a role to bring together parties who provide loans or lenders with those who need loans or borrowers (Harahap et al., 2017). Fintech payments and fintech lending are currently the most prominent things in favor of the Indonesian people, this happens because of the increasing demand for funding which is entirely unable to be fulfilled by conventional financial institutions (Wajuba et al., 2021).

Data publications submitted by the Otoritas Jasa Keuangan (OJK) explain that, the number of borrower or borrower accounts has increased by 135 percent from 2019 to 2020, 68 percent from 2020 to 2021, and 36 percent from 2021 to 2022, while the number of loans disbursed from 2019 to 2020 has increased by 91 percent, 2020 to 2021 by 90 percent, and 2021 to 2022 by 78 percent. With the increase in the number of accounts and funds disbursed, it shows that people are starting to make loans through fintech as an alternative to loans organized by conventional institutions, besides that the Indonesian people give a good welcome to the presence of fintech peer to peer lending because it is able to provide convenience in all types of financial transactions in the form of efficient time and complete services provided (Rahma, 2018).

Against that background, the purpose of this study is to analyze whether the dimensions of the financial inclusion and fintech lending have influence on Indonesia's economic growth in 2019-2022 with panel data regression. This needs to be assessed, because financial inclusion and fintech have the potential to expand the reach of financial services to individuals who were previously unreached by conventional financial institutions, especially in Indonesia where there are still areas of lack of access and services. The impact can encourage economic growth by mobilizing economic activity in sectors that previously lacked access. The novelty from previous studies, namely the use of fintech lending variables combined with the dimensions of financial inclusion, especially in Indonesia, where previous studies analyzed separately between financial inclusion and fintech to the economic growth. With this study, researchers hope that the results obtained can provide an overview of how much influence financial inclusion which includes bank and non-bank financial institutions on economic growth in Indonesia. The findings of this study can serve as a reference and guide for public policy makers, especially financial service system providers and interested parties to determine the direction or strategy used to reach the stage where financial inclusion becomes part of encouraging the creation of sustainable economic growth.

2. Theoretical Background

Economic Growth

According to Todaro and Smith (2006) economic growth is a process of increasing productive capacity in an economy continuously or continuously over time so as to produce increasingly greater levels of national income and output. There are important factors that drive economic growth, capital accumulation, the number of productive labor force, and technological progress and development mankiw 2015. Todaro (2003) suggests that several factors can impact a country's economic growth. Firstly, there's the Labor Force and Population Growth, where the number of workers is closely tied to population growth. The ability for population growth is influenced by how effectively an economy can absorb its labor force. Secondly, there's Capital Accumulation, which involves the integration of new assets such as land, fiscal equipment, and human resources, alongside current income, aimed at bolstering future income. Lastly, there's Technological Progress, where economists argue that advancements play a crucial role in economic growth. Technological progress has a significant impact as it can introduce new methods and improve existing ones in conducting work.

Theory of Finance and Growth

Financial inclusion contributes to economic growth, this explanation is found in the theory of finance and growth stated by (Gurley & Shaw, 1955; Levine, 2005; McKinnon, 1974). According to this theory, financial institutions operations have the power to modify financing circumstances, which in turn can affect the amount of money invested, as well as decisions about production and consumption, all of which have an impact on output and economic growth. This theory places a strong emphasis on how improving the financial sector's growth and expanding financial assistance to the underprivileged will improve financing conditions and ultimately lead to higher economic growth since the funds will be channeled toward productive endeavors that could boost output. The theory of finance and growth further elucidates that when financial inclusion assumes a pivotal role in fostering economic growth, it will draw more participants to the financial system. This will enable financial institutions to channel deposits from new account holders to parties in need of funds, which will then be used to boost economic growth by increasing consumption, investment, and production. The theoretical study presented by Ozili (2020) states that increased financial inclusion through financial institutions will trigger economic expansion. Enhancing the performance of financial institutions will have an effect on promoting the degree of financial intermediation, which will ultimately result in an enhanced economic system with economic growth as an indicator. This is how to increase economic growth through financial inclusion.

Financial Inclusion

Financial inclusion is a process to ensure easy access, availability and use of the formal financial system by all economic actors. Financial inclusion provides financial services such as savings, credit, insurance and payments at price levels that all economic actors, especially low-income economic actors, can afford (Okaro & Celestine, 2016). Bank Indonesia (2014) explains financial inclusion is the culmination of all initiatives aimed at eliminating barriers to financial services that are both non-price and price-based. Indicators that can serve as benchmarks for a country's financial inclusion involve a number of key elements. First, availability or accessibility is a parameter to measure the extent to which people are able to utilize formal financial services, taking into account aspects of physical and price affordability. Next, usage is a relevant benchmark to assess the actual ability to use financial products and services, covering aspects of regularity, frequency, and duration of use. Quality evaluation is conducted by considering the extent to which financial products and services can meet customer needs. Thus, these indicators cover the dimensions of availability, usage, and quality to provide a comprehensive picture of a country's financial inclusion. These indicators can be used to assess a nation's financial inclusion.

Financial inclusion has 3 dimensions proposed by Hanivan & Nasrudin (2019) Sarma (2008), access dimension, availability dimension, and usage dimension. The access dimension is used to assess the extent to which financial services can penetrate or reach many users in the community. That is, financial inclusion refers to the condition where financial services can reach as many users as possible or have a very wide range. This access dimension can be illustrated with bank accounts in the community, the higher the banking penetration to every element of society, the higher the growth of new account ownership (Saraswati, 2023).

The research conducted by Emara & Said (2021); Ribaj & Mexhuani (2021) as a result, ownership of a bank account, a measure of access, positively affects and influences economic growth. With the ownership of a bank account, it will be accompanied by developments in the level of savings, this may indicate that banks have an increased ability to channel credit as an investment in the productive sector. However, research by Saraswati (2023) states the opposite result where the number of savings account ownership in banks has no influence to the economic growth because a population can have several accounts so that even though the number of high account ownership is not able to signal a high level of financial inclusion, this can be clarified again when someone does not utilize the financial services provided but only has a banking savings account.

The next dimension is availability described by the presence of banking services that can be utilized by the community, so as to provide convenience for the community or users of banking services, in this case in the form of the quantity of Automated Teller Machines (ATMs) and the quantity of service offices or bank branches (Hanivan & Nasrudin, 2019; Sarma, 2008). Research by Ifediora et al. (2022); Van & Linh (2019) the results show that the number of ATMs and the number of service offices or bank branches has positive effect on economic growth because the number of ATMs and bank branches has a relationship with increasing the ease of public access to formal financial sources so that communication about financial services also increases, the result is that people will have an understanding of finance and be able to distinguish financial products. Increasing the number of transaction access points will encourage people to increase their involvement in economic activities, which in turn can provide a positive response to economic growth. However, the research by Zaqiyah et al. (2022) the results show the opposite, where the number of bank service offices actually has a negative impact on the economic growth because when banks do not carry out their role optimally it will result in disproportionate returns obtained from new branch offices. So that this will interfere with the intermediary role of formal financial institutions and ultimately economic growth will be hampered.

Then the usage dimension means the utilization of financial services where the facility is provided by the bank. This dimension is used because account ownership is considered insufficient because when the account ownership rate is high it does not reflect the maximum utilization of banking products by the public while utilizing financial services, so that lending by banks is also needed in this use dimension (Hanivan & Nasrudin, 2019; Park & Mercado, 2018). Research by Sulistiyani & Muslinawati (2023); Sunday (2016) stated that lending will has positive effect on economic growth and will strengthen the increase in Gross Domestic Product (GDP). However, research by Zepeda, (2022) showed the opposite result, where credit disbursed actually had a negative effect on economic growth.

***H_1*:** *Access dimension represented by savings accounts has a significant effect on economic growth in Indonesia*

***H_2*:** *Availability dimension represented by bank offices has a significant effect on economic growth in Indonesia*

***H_3*:** *Usage dimension represented by commercial bank lending has a significant effect on economic growth in Indonesia*

Financial Technology

In the neoclassical hypothesis, advances and innovations in technology can encourage and influence the increase in economic growth. The Solow model explains that technological advances can provide efficiency in the production of goods and services so that more output is produced when this technology is utilized (Mankiw, 2016). Technological advances have penetrated all aspects, the influence of technological advances in the financial sector or commonly known as financial technology (fintech) also plays a role in shaping economic growth (Song & Otoo, 2022). Fintech is defined as a company that applies modern technology in the financial sector.

The study conducted by Wahyono et al. (2022) affirmed that fintech has a positive impact on the regional economy, as evidenced by the growth in Gross Regional Domestic Product (GRDP). Wajuba et al. (2021) found in their research that fintech peer-to-peer lending has a favorable effect on economic growth in Indonesia, indicating that the expanding peer-to-peer lending industry contributes positively to overall economic growth. But the research conducted by Simorangkir et al. (2021) yielded contrasting results, indicating that fintech did not exert a significant influence on short-term economic growth. This was attributed to a lack of comprehensive understanding and direct engagement of the community with fintech, leading to suboptimal utilization of fintech services. Consequently, these factors are expected to have implications for economic growth.

***H_4*:** *Fintech represented by fintech lending has a significant effect on economic growth in Indonesia*

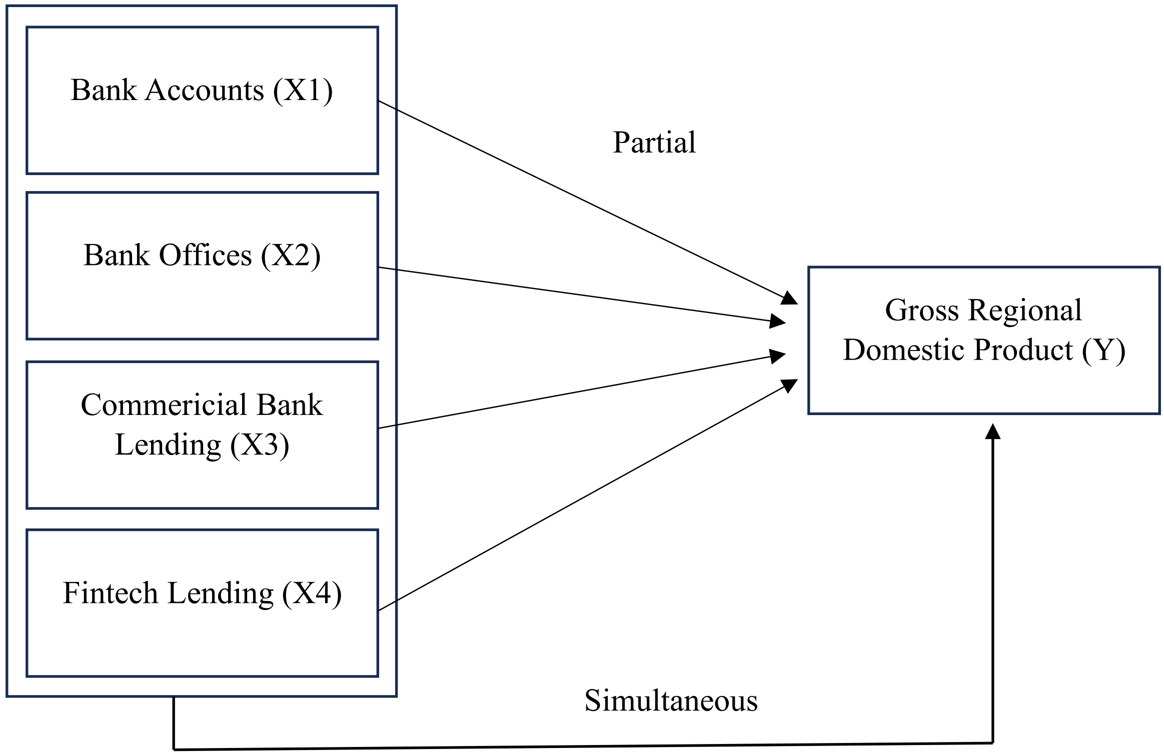

Figure 1. Research Analysis Framework

3. Methodology

The approaches used in this research are quantitative and use secondary data collected from the official website of the Badan Pusat Statistik (BPS) for Gross Regional Domestic Product (GRDP). Then the amount of commercial bank lending, number of bank office, and distribution of fintech lending sourced from the official website of the Otoritas Jasa Keuangan (OJK). And the number of bank accounts obtained from the Lembaga Penjamin Simpanan (LPS). In collecting data from each variable, there are limitations to the data obtained, where not all variables have data availability in all provinces in Indonesia, especially in the savings account ownership variable which does not show data from several provinces from 2019 to 2021. To overcome this, in this study, regional grouping is carried out which combines several provinces in the form of one large archipelago or groups based on regional areas which are then divided into six regional areas of Indonesia. The grouping and division of regions in this study also refers to the grouping and division of regions on financial inclusion indicators carried out by Bank Indonesia as the central bank in Indonesia. Because in implementing the financial inclusion index measurement, Bank Indonesia divides Indonesia into six regional areas. This is a step that can be taken to answer the problem of limited data availability. Therefore, the subject of research used in this research is Indonesia which includes the regions of Sumatra, Java, Bali and Nusa Tenggara, Kalimantan, Sulawesi, Maluku and Papua. In this study, the analytical method applied is panel data regression because the dataset used is a combination of time series and cross section data. and the research time period used is semi-annual 2019-2022. The dependent variable in this study uses economic growth proxied by Gross Regional Domestic Product (GRDP). The independent variables used are the number of savings accounts, the number of bank branches, the amount of general credit to all sector by commercial bank, and the amount of distribution of funds through fintech.

In this study, the analytical approach used is panel data regression analysis with the Eviews 10 application, because the panel data regression method is used to determine whether there is a significant effect of more than one independent variable on the dependent variable. Panel data regression generally has three forms of regression models, namely Common Effect, Fixed Effect, and Random Effect. To determine the best model of the three models, it is necessary to conduct three tests, namely the Chow test, Hausman test, and Lagrange Multiplier test. Of the 3 tests, the Chow test is used to select the most suitable model between Common Effect and Fixed Effect. Furthermore, the Hausman test is used to determine the optimal model between Random Effect and Fixed Effect. Lagrange Multiplier test for determining a suitable model between Common Effect and Random Effect. Regression analysis was conducted to examine the correlation between the independent variables and the dependent variable.

Table 1. Operational Definition of Variables

Variable	Variable Definition	Unit
Gross Regional Domestic Product (Y)	GRDP represents the aggregate or total value of goods and services generated from all economic activities within a particular region during a specified year.	Billion Rp (Log)
Saving Accounts (X1)	Savings account refers to the aggregate collection of individual savings accounts opened by customers at various commercial banks registered in Indonesia.	Unit (Log)
Bank Officess (X2)	Bank offices refer to the total number of offices owned by commercial banks spread across various regions in Indonesia.	Unit
Commercial Bank Lending (X3)	Lending by commercial banks to all sectors of the economy refers to the aggregate total of credit facilities provided by commercial banks to various sectors in the form of consumption, investment, and working capital in a country's economy.	Billion Rp (Log)
Fintech Lending (X4)	Lending by fintech companies to the public includes lending activities conducted by fintech platforms to individuals or businesses in various segments of society, and is not limited to individual borrowers, small and medium entrepreneurs, and groups that have not been traditionally reached by formal financial institutions such as banks.	Billion Rp (Log)

4. Empirical Findings/Result

Table 2. Best model selection test results

Test	Probability
Chow Test	0.0000
Hausman Test	0.0000

Source: Eviews Data Processing 10

There are three different test models namely Chow Test, Hausman Test, and Lagrange Multiplier Test. To determine the model between Common Effect and Random Effect, the Lagrange Multiplier Test is used, while to determine Random Effect and Fixed Effect, the Hausman Test is required. The results of the panel regression analysis not all independent factors significantly affect economic growth, according to the findings of the panel regression analysis used to examine Indonesia's economic growth. After analyzing the common effect, fixed effect, random effect regression models, then test the best model using the Chow test and Hausman test. Table 2 explains that the probability a value of 0.0000. The value obtained is less than 5% with a significance level ($\alpha = 0.05$), so selection of the best model used in this study is the Fixed Effect Model and no need to do the Lagrange Multiplier test.

Table 3. Fixed Effect Model Results

Variable	Coeffisient	T	Prob	Note
Saving Accounts (X1)	0.030244	3.048333	0.0042	Positive Significant
Bank Offices (X2)	-0.000511	-1.378165	0.1762	Negative Insignificant
Commercial Bank Lending (X3)	0.892964	3.360644	0.0018	Positive Significant
Fintech Lending (X4)	0.005931	0.308981	0.7590	Positive Insignificant
Dependent Variable: GRDP				

Source:Eviews Data Processing 10

According to the regression findings presented in Table 3, it is evident that the significance values of the three variables indicate is Saving Accounts (X1) = 0.0042, Bank Offices (X2) = 0.1762, Commercial Bank Lending (X3) = 0.0018, and Fintech Lending (X4) = 0.7590. This sow that Saving Account has a positive and significant effect on GRDP, Bank Office has an insignificant and negative effect on GRDP, Commercial Bank Lending has a significant positive effect on GRDP, and Fintech Lending has an insignificant positive effect on GRDP.

Table 4. F Test and Coefficient of Determination

Prob(F-statistic)	Adjusted R-squared
0.000000	0.998461
Predictors: (Constant), Saving Accounts, Bank Offices, Commercial Bank Lending, Fintech Lending	

Source:Eviews Data Processing 10

Table 4 shows that the independent variables consisting of Saving Accounts, Bank Offices, Commercial Bank Lending, Fintech Lending are proven to have a simultaneous effect on GRDP in Indonesia. This is evidenced by the value at Prob F = 0.0000 less than 0.05. Furthermore, the Adjusted R-squared coefficient of determination obtained a value of 0.998461 which indicates that GRDP is influenced by the independent variable by 99.84% while the remaining 0.16% can be explained by other variables outside the model.

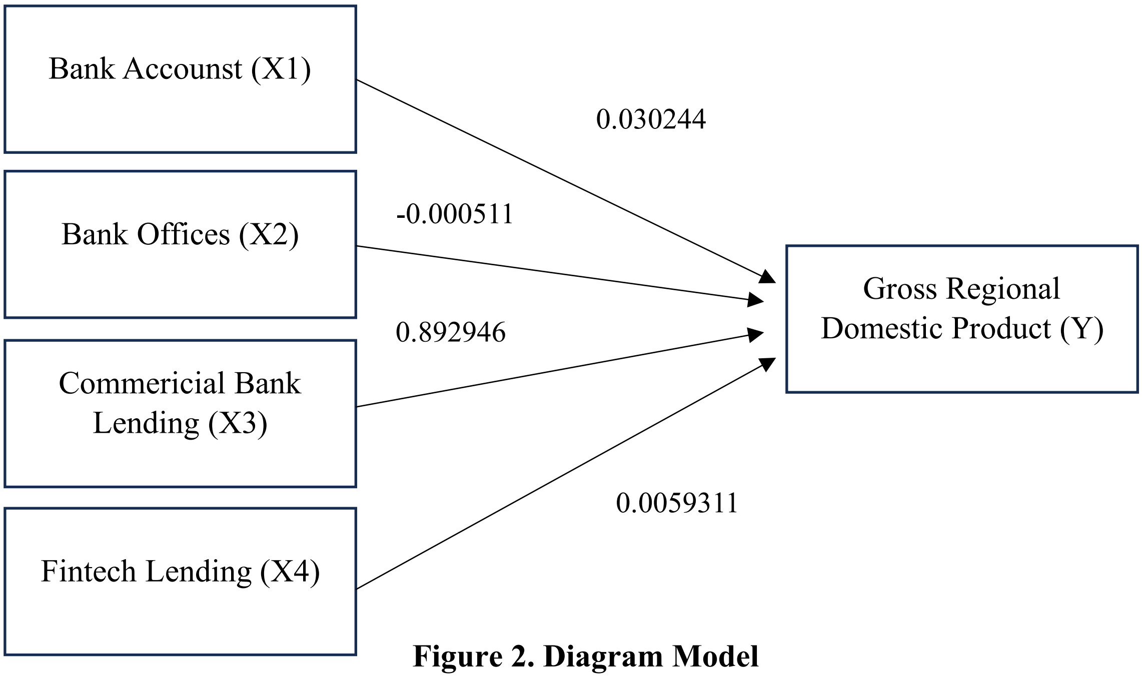

Figure 2. Diagram Model

The objective of the analysis is to determine the influence of Saving Accounts (X1), Bank Offices (X2), Commercial Bank Lending (X3), Fintech Lending (X4) on GRDP (Y). The results showed that Saving Accounts has an influence with a value of 0.030244 on GRDP. This means that if Saving Accounts increases by 1%, then GRDP increases by 0.030%. Bank Offices shows its influence on GRDP of -0.000511. This means that when the Bank Offices decreases by 1%, GRDP increases by 0.000%. Furthermore, the results revealed Commercial Bank Lending has an influence with a value of 0.892946 on GRDP. This states that if Commercial Bank Lending increases by 1%, GRDP will increase by 0.892%. Fintech Lending has an influence on GRDP with a figure of 0.005931. This means that when there is an increase in Fintech Lending by 1%, GRDP also increases by 0.005%.

5. Discussion

The number of saving account ownership in commercial banks has a significant and positive effect on GRDP in Indonesia. The existence of a positive influence indicates that if account ownership increases or increases, it will encourage economic growth to grow higher. This can happen because when people have an account with a bank, it will be followed by savings stored in their account. So that with the community savings stored the bank will be able to have the ability to manage the funds stored, the more funds collected, the more funds are mobilized by the bank. These funds by the bank are also used to invest in sectors that are considered to have productivity so that it will spur economic growth to grow higher. This is in accordance with the theory of finance and growth, where the participation of the community, in this condition the bank utilizes the deposits owned by new account holders which will be intended for those who need further funds to be used in activities that spur increased economic growth. The results of this study are in line with research by Emara & Said (2021); Ribaj & Mexhuani (2021) where the number of account holdings has a positive and significant effect on economic growth. Simply put, the more people who have savings accounts, the more funds will be stored in banks which are then processed by banks for productive activities such as financing the industrial sector, so that the sector can increase output and trigger economic growth. One of the steps that can be taken is to increase the ownership of new accounts, especially for people who have never utilized access to formal financial services, especially in rural areas. Thus the community also shows that there is a utilization of the use of financial services available, one of which is by having accounts and savings that they keep at the bank.

The number of commercial bank offices has an insignificant impact on GRDP in Indonesia. The insignificant effect of the number of bank offices on economic growth is caused by the fact that banks are not able to carry out their role effectively and maximally which results in disproportionate returns received from the opening of bank offices, so that this will refer to the disruption of the intermediary role of formal financial institutions which leads to hampering economic growth. Meanwhile, opening a new bank office requires high costs for investment purposes in both physical capital and the necessary human resources. Another problem caused by the ineffectiveness of banking operations is the lack of innovation in products and services. The increase in the number of banks, on the other hand that do not have this influence is also due to the disrupted performance of banks due to the existence of Non Performing Loans as a result of systematic risk that has increased over time which has led to a decrease in bank performance and profits (Bernini & Brighi, 2018). This result is in line with research by (Saraswati, 2023) which states that bank offices have a negative influence on economic growth. In addition, currently banks have also adopted technology in their operational services in the form of internet banking or mobile banking which is able to encourage the effectiveness of operational performance for users and customers of financial services, because it can provide convenience and speed of service. In addition to the adoption of technology, banks also have banking agents with a commission sharing system for each transaction which is generally available at shops or kiosks in the area so that there is no need for a physical bank office. Thus banks that cannot improve performance or profits and apply technological advances in service innovation will experience ineffectiveness in their performance, because this will affect the obstruction of the financial system and then the economy will be disrupted, coupled with innovations that are still lacking in financial products that can reduce public interest in saving so that the bank's intermediary function in channeling funds to those in need will be hampered (Takbiri et al., 2015). Policy implications that can be suggested to policymakers when wanting to increase economic growth must innovate from products developed by banks and also collaborate with technological advances so that services to the public do not need to be done face-to-face but can be done through mobile services or cellular services, as well as optimizing government programs Office-Less Financial Services in the Framework of Inclusive Finance which also involves banking financial institutions to increase public participation in accessing financial services

In the general credit variable to all sectors by commercial banks or commercial bank lending, is proven to have a positive and significant effect on GRDP. These results indicate that when lending by commercial banks increases, economic growth will be encouraged to increase as well. The theory of finance and growth explains that the activities of financial institutions can affect the state of financing which in turn can have an effect on decisions to invest, production and consumption activities which will ultimately have an impact on increasing output and increasing economic growth. Increased lending by banks will help stimulate income because the credit or loans channeled can be utilized as capital for the community, especially for productive activities and activities both to start a business and to enlarge and expand the scale of the business, so that from these productive things will result in increased production that can encourage economic growth. In addition to utilization in the productive sector, credit channeled by commercial banks can be used for public consumption needs. Credit used as a fulfillment of consumption can encourage economic growth because previously unmet needs can be resolved by lending, so that it will have an impact on increasing demand for both production of goods and services which will then increase economic turnover. To obtain credit, people are required to have a savings account with a bank that distributes and provides funds (Maftuhin & Kusumawardani, 2022). The study's findings are consistent with Sulistiyani & Muslinawati (2023); Sunday (2016) where an increase in lending can have a positive effect on economic growth and further encourage an increase in GDP. The sector that benefits the most in this case is the industrial sector, especially small and medium enterprises (SMEs). Given that there are various types and a lot of SMEs in the community today, financing is certainly needed to increase the capital used to increase the scale of production. With the increase in the scale of production produced by SMEs, there will be an increase in the output produced. So that the increase in output produced will trigger an increase in the economy. In addition, SMEs is the largest contributor to pdb for Indonesia, of course the government will provide convenience in providing access to financing for SMEs actors. The form of government policy towards umkm is to increase the percentage of lending by commercial banks specifically intended for SMEs. So that with the distribution of larger loans, it is hoped that it will be able to increase its productivity.

Fintech lending has not been able to have a significant effect on GRDP. The absence of a significant influence by fintech lending on economic growth is due to the dissemination of information about fintech to the wider community which is still limited, besides that the information received by economic actors regarding finntech lending has also not been conveyed perfectly (Simorangkir et al., 2021). So that as a result of not maximizing and not perfecting the delivery of information about the use and utilization of fintech lending, the optimization of the use of fintech lending has not been able to be realized. The use of fintech that requires communication tools such as smart phones and internet networks is quite easy for people who are facilitated by ownership of smart phones and the availability of interent networks, but for people who do not have smart phones and the uneven internet network in each region causes constraints on the dissemination of information about fintech coupled with there are still people who are not capable of utilizing technological advances. So with these problems, fintech is considered exclusive by some people which causes the use of fintech has not been maximized in encouraging economic growth in Indonesia. Other things that cause fintech to not have an influence on economic growth are regional differences, weak economies, and due to inadequate innovation capacity in a region (Deng et al., 2019). In addition, to encourage the introduction of fintech lending to the public, it is necessary to conduct socialization and education related to financial literacy and inclusion, especially by regulators or official supervisors from the government and the active role of fintech companies related to technological advances and developments in the financial sector, so that the optimal dissemination of information about financial technology can touch every element of society without any gaps due to imperfect delivery and dissemination of information. Thus, economic growth is realized and can encourage the achievement of sustainability elements which include income equality, poverty alleviation, and improving the quality of life and welfare of the community. Fintech, especially fintech lending, is part of non-bank financial inclusion. Based on Gabor & Brooks (2017) who conducted a study on financial inclusion and fintech, where fintech is a revolution in finance that can add, strengthen and accelerate financial interventions in communities that have a distance from formal finance. Therefore, the distance between the community and formal financial institutions is filled with the presence of fintech, especially fintech lending which can help people who need funds.

6. Conclusion

The results showed that the variable number of bank offices as a dimension of availability by bank financial institutions has a negative direction and the variable fintech lending by non-bank financial institutions has a positive direction has no significant effect on GRDP as a proxy for economic growth in Indonesia, the variable number of saving account as a dimension of access and commercial bank lending as a dimension of use has a significant positive effect on GRDP which represents Indonesia's economic growth. The number of saving accounts, number of bank offices, commercial bank lending, and fintech lending, jointly contributed 99.84% while the remaining 0.16% was caused by other variables not considered in this study.

This research has limitations that cannot be ignored, the limitation in this study is the use of one variable that represents each dimension of financial inclusion, where each dimension has several elements in it. In addition, the fintech variable only contains fintech lending variables, even though society is currently experiencing the development of various types of fintech. It is recommended for future research to be able to add and combine new variables that include financial inclusion and fintech. As well as expanding the research area and year.

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