

DIGITAL ECONOMIC & FINANCIAL INCLUSION FOR ECONOMIC RECOVERY IN INDONESIA

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Abstract: The research focuses on economic recovery strategies by utilizing the digital economy and financial inclusion. The basic postulate in this research is an empirical study showing an increase in the digital economy during a pandemic. This resulted in the use of financial inclusion increasing significantly. So that both are the biggest variables in post-pandemic economic recovery. The digital economy and financial inclusion are driving forces in national economic recovery. The basic assumption of this research refers to access to formal financial services, which increases the ability to drive micro-economy. The output of this research is a model of an elastic national economic recovery strategy using digital platform business and financial inclusion. The model developed in this study offers an inclusive financial access strategy in the digital economy sector to drive microeconomics. With the movement of microeconomics, the acceleration of post-pandemic economic recovery will be more effective. As an indicator of success, the objects used in this research are start-up growth and digital-based financial access. In addition, the aspects used as benchmarks for success in this model are: Governance, People, and Financial & Economic.

Keywords: *Economic Recovery, Financial Inclusion, Digital Economics.*

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1. Introduction

The Indonesian government declared the pandemic to end in 2023. However, several countries have ended the pandemic crisis long before 2023. The study (Kroner et al., 2021) reveals that several countries have managed to get out of the pandemic trap. However, not a few regions of the country are still struggling in economic recovery. Even India based on studies (Kedia et al., 2020) needs quite a long time to restore economic stability. It is no exception for super power countries such as the People's Republic of China (PRC) to experience the same thing. So, (Q. Wang & Zhang, 2021) reveals changes in economic growth in China due to changes in energy consumption. One of the implications of the pandemic for 2 years is financial difficulties in several regions. The fact that several countries are experiencing difficulties can be seen from the economic growth of countries in the Southeast Asia Region. Even throughout mainland Asia, only 3 countries had positive growth during the pandemic. The three countries are Vietnam 2.3%, China 2.3%, and Chinese Taipei (Taiwan) 2.98%.

The decline in economic growth cannot be separated from the drag on the economy during the pandemic. In fact, several countries have had to divert their budget allocations for vaccine spending. The study conducted (Teng et al., 2022) revealed that several countries experienced

financial difficulties because they had to divert their budgets for post-pandemic recovery. Furthermore, the study conducted (Santoso & Fianto, 2022) underlined that this change in the economic map cannot be separated from restrictions during the pandemic. Some export commodities are not well absorbed by the market (Apriliana et al., 2021). Furthermore, studies (Che et al., 2020; Mao et al., 2021) revealed that one of the economic difficulties during the pandemic was export commodities that were rejected by destination countries during the pandemic. Indonesia is not immune from financial difficulties due to the diversion of the budget for health (vaccination) spending. Several studies (Deb et al., 2022; Rodrigues & Plotkin, 2020) revealed that vaccination programs run by several countries had implications for economic contraction.

During pandemic from 2020 to 2022 has changed the business map and created new business models. One of the new business models is digital-based business in the creative industry. Digital-based business is the driving force for the economy during the pandemic. The study (Triwahyuni, 2022) reveals that a digital-based economy is a savior for micro sector businesses. Research (Santoso, 2020) also confirms that these business changes are also supported by changes in marketing models and strengthening the branding of the commodities being sold. This business transformation is also one of the strategies implemented by the government to accelerate economic recovery. This potential provides a projection of the impact of increasing the digital economy more than eightfold by 2030. This refers to the projected digital business market capitalization that has reached IDR 146 trillion in 2025 or less than 2 years from now. Furthermore, the research conducted (Siagian & Cahyono, 2021; Sutrisno, 2020) revealed that Indonesia's strategy was right on target by increasing the creative industry sector.

The focus of this research is on economic recovery strategies by utilizing the digital economy and financial inclusion. The basic postulate in this research is an empirical study showing an increase in the digital economy during a pandemic. This resulted in the use of financial inclusion increasing significantly. So that both are the biggest variables in post-pandemic economic recovery. The digital economy and financial inclusion are driving forces in national economic recovery. This refers to several studies conducted by (Santoso & Fianto, 2022; L. Wang et al., 2021a, 2021b) that an economic recovery strategy requires targeted policies to be more effective. These studies also underline that economic recovery is more effective when it focuses on the micro sector. So that these changes become a transformation that drives the improvement of the digital platform economy. Several studies (Ahmed et al., 2017; Cueto et al., 2022; Srinivasan & Eden, 2021) underline that business changes towards digital are increasingly massive. The digital economy is not affected by social restrictions during the pandemic. This type of economy continues to run because the platforms used are very much in line with the current demographics of millennial customers. Even though not a few business people are experiencing difficulties, some businesses are still surviving amid the onslaught of restrictions. According to a study (Hadjielias et al., 2022), businesses that have survived during a pandemic are those that are running a business by accommodating millennial needs with a digital mindset.

Digital Business brand referring to theory (Bican & Brem, 2020) reveals that the amount of money circulating in a digital-based business if managed properly will become the potential for economic growth. This is reinforced by the startup businesses that are developing in Indonesia until 2022 with a total of 2,391 startups. The start-up has become one of the pillars in improving the digital economy. So, it is not surprising that 2 of them have become decacorns. Meanwhile, the number of start-up businesses that have reached the unicorn phase is 8 start-

ups. Startup businesses have become atrend over the past three years because the micro sector has become the safest choice to increase growth or get out of the grip of an economic crisis (Davis & Zhao, 2019; Suwarni et al., 2020). However, to realize a digital-based business, it requires at least 3 components, namely economic, people and governance. The economy is the basis for driving all sectors, people are the market potential for product absorption, governance is the stakeholders who issue policies (Erstiawan, MS, 2018). The study (Jaswadi et al., 2015) strengthens these three components, especially the government which provides facilities in the form of infrastructure to support business.

The novelty offered in this study is the variables used, namely digital-based economy and financial inclusion. Both are macroeconomic indicators that emerged and were born during the pandemic. These two variables are also the main factors in driving economic recovery. The pragmatic contribution of this research is the application of the economic recovery strategy model for the creative industries sector using digital economics and financial inclusion. In addition, this research also contributes to the continuation of this row model which can be applied in several countries with different demographic and geopolitical conditions. This refers to research (Ajmal et al., 2021) which reveals that the solution to the problem of the downward trend of the economy during the pandemic is to increase financial stimulus to rotate the micro sector.

The digital economy is basically all economic activities with the help of the internet. In addition, the digital economy is also supported by artificial intelligence technology or what is often called Artificial Intelligence (AI). Several studies (Huang & Rust, 2021; Verma et al., 2021; Yang et al., 2021) reveal that AI has been used in many business sectors to help business people make decisions. According to a study (Ouyang & Jiao, 2021), business in this industrial revolution era cannot be separated from AI, which in turn creates a digital economy. Furthermore (Tapscott, 2018) reveals that the digital economy has very specific characteristics. These characteristics include socio-political and economic where all of them are intelligence-scale information spaces. Information capacity, access speed, data accuracy, complex data instruments, and data ordering are part of the excesses of the digital economy. Based on the study (Tapscott, 1999), there are four important points in the digital economy, namely: 1) geographic location is no longer important; 2) the existence of a platform as a keyword; 3) development of work networks; and 4) using big data. Thus, the digital economy refers to all economic activities assisted by the internet and AI. So that in its development, the digital economy has changed the pattern of economic activity not only about transactions, but further than that, namely a complex ecosystem. The next phenomenon that is developing is that the digital economy gives a new face to the business world by facilitating the transaction process.

The digital economy certainly provides benefits for business people and buying entities. The studies conducted (Rafferty et al., 2017; Triwahyuni, 2022) revealed that there are at least 5 benefits of the digital economy, namely: 1) Availability of massive information; 2) Time efficiency; 3) Cost efficiency; 4) Reducing obstacles; and 5) increasing economic growth. Besides having benefits, the digital economy also has its own risks. Studies conducted by (Chen et al., 2021; Litvintseva & Karelin, 2021; Spanagel et al., 2020) underlined at least 3 main problems facing the digital economy era. The three problems are: 1) internet security; 2) human resource capability; and 3) regulation. These three things are the main obstacles in the development of the digital economy.

Until now there is no standard term regarding financial inclusion either from textbooks or official studies in journals. However, referring to (Pikahulan, 2020) financial inclusion is the availability of financial access to various formal financial institutions, products and services.

This is aimed at none other than improving the welfare of society. In recent times there has been an increase in access to financial inclusion. This is an indication that people's understanding of products, systems, service availability and financial services is getting higher. This increase cannot be separated from relatively low costs, efficiency, effectiveness and quality of transactions. The indicators used to measure financial inclusion based on the study (Nisa et al., 2018; Widyaningsih & Hersugondo, 2021) refer to the number of accounts per population, use of accounts for savings purposes, transactions within one year. These activities include transfers, withdrawing funds, and loans.

Financial inclusion was formed basically to reduce the gap in financial services between people who already have bank accounts and those who don't. In other words, the unbanked society still gets banking financial services with certain media (Erstiawan, 2021). This access is carried out through an inclusive financial system that can be accessed by the public whether they have a bank account or not. Research conducted (Prasetyaningrum, 2021) reveals that increasing access to financial inclusion services has made it easier for formal financial services to the public at a more rational price and time. Financial inclusion is not just about holding formal savings at a bank. Furthermore (Diah Fitri Astri Mastuti & Indriyani, 2021) revealed that financial inclusion includes access to other financial products and services. Other financial services in this case include pension funds, insurance, and investment.

The development of financial inclusion is not without reason. The gap between the bank society and the unbanked society is more due to several things, namely: 1) price barrier (range of costs); 2) information barrier (limited information); 3) product barrier design (formal services that are not suitable for use); and 4) channel barrier (inappropriate means). Some of these gaps will be reduced or even eliminated by presenting services that can accommodate all layers. So that this financial inclusion will provide benefits: 1) the creation of an efficient economy; 2) financial system stability; 3) new banking market potential; 4) sustainable economic growth; and 5) improvement of community welfare.

Financial inclusion became a trend after the 2008 world crisis. This was based on the impact it had on low-income groups, living in remote areas, marginalized people or what could be called the bottom of the line pyramid group. Based on a study (Vo et al., 2021), they are a group of people who are basically unbanked (don't have a bank account) and are recorded very high outside of developed countries. The 2010 Toronto Summit reaffirmed by issuing 9 Principles for Innovative Financial inclusion to become guidelines for the development of financial inclusion.

The National Economic Recovery Program (PEN) started in 2020 during the second year of the pandemic. In those years, Indonesia's economic condition was still able to contract by 2.97% in the first quarter of 2020. This created positive sentiment for the business world. The economic situation at that time was still quite good when compared to conditions in various Southeast Asian regions. Research (Santoso, 2022; Santoso & Fianto, 2022) reveals that Indonesia's conditions are better than Singapore, Thailand and Malaysia. Even though it has not experienced a negative contraction, this phenomenon needs to be maintained to maintain economic stability. There are 3 (three) policies that can be implemented, namely: 1) increasing domestic consumption; 2) increasing the activities of the business world; 3) maintaining economic stability and monetary expansion.

One form of monetary expansion is increasing financial inclusion, namely increasing access to formal financial services. Access to financial services is a form of financing for domestic consumption. If domestic consumption increases, the activities of the business world, both micro and macro, will also move. But what needs to be remembered is that domestic

consumption is highly dependent on people's purchasing power. This is in line with research (Prayogo & Sukim, 2021) which reveals that people's purchasing power is very vulnerable to changes due to macroeconomic conditions. Therefore, at the beginning of the PEN program, the government allocated a budget of IDR 127.1T to provide a stimulus to increase people's purchasing power.

2. Research Method

This research is qualitative research with a literature review approach. One of the stages in this research is to conduct an empirical study to support the basic assumptions and research hypotheses by critically examining several studies. This critical study includes a review of ideas, knowledge and also new findings in reference using an academic-oriented approach. The formulation of the theoretical and methodological contributions is the next stage. This refers to what was stated (Zed, 2004) that the stage of further qualitative research is a literature review.

This research will examine more deeply the development of the digital economy and financial inclusion which is used for National Economic Recovery. This strategy becomes a generic model and of course has high elasticity, so that the developed model can be applied to all regions/regions with different demographics and geopolitics. The elasticity of the model offered is certainly not an excuse, because this generic model can be applied in all countries with different conditions. One of the considerations for using this approach are: 1) this research will be more logical and accurate if it is carried out using a literature review approach; 2) secondary sources of research data are available in financial services entities; 3) pre-liminary research on the same topic has been carried out and requires the development and application of a more elastic model; 4) as a development, this research is a follow-up to previous research (pre-liminary research). The conceptual framework of this research can be seen in the following chart:

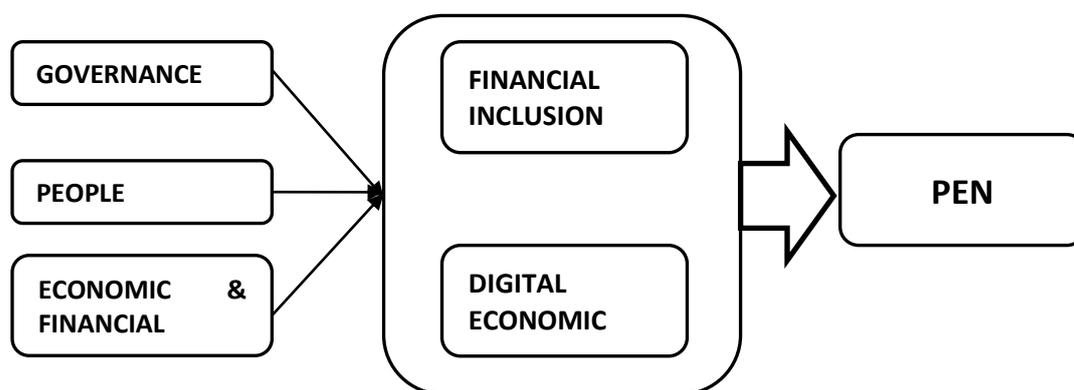


Figure 1 Conceptual Framework

This research focuses on the study of National Economic Recovery (PEN). The model developed refers to strengthening the digital economy and increasing access to financial inclusion. These two variables are the main focus in post-pandemic economic recovery. This model can be applied to various Regions with different demographics and geopolitics due to the level of elasticity of the model. Business during a pandemic provides access to the growth of these two variables. As an indicator of success, the objects used in this research are start-up growth and digital-based financial access.

3. Results and Discussion

3.1 Results

Consumer behavior during the pandemic has changed the economic map. These changes cannot be separated from the policy of restrictions during a pandemic. Consumer behavior is changing from conventional to digital in terms of making purchases. Apart from that, during this pandemic, startup businesses began to emerge which also encouraged the increase in digital finance. Startup businesses have bundles with digital financing to make it easier for consumers to make transactions. This increase of course requires supervision in the form of government regulation. So that synergy between business actors and the government is needed for the success of supervision. The following are 3 aspects that need attention in National Economic Recovery when using digital business and financial inclusion.

3.2 Discussion

Increasing economic growth cannot be separated from government intervention. Government stimulus to improve the economy is injected into various sectors. One of the sectors that was given a large fiscal stimulus space was the Ministry of Communication and Information Technology. The amount of the ministry's budget always increases from year to year.

Table 1.
Ministry of Communication and Informatics Budget

Budget Amount	Year
Rp20T	2020
Rp26T	2021
Rp26T	2022

Source: Ministry of Communication and Informatics

The increase in the budget stimulus provided by the government in the graph above shows the government's commitment to supporting the digital economy. This large budget is used to build and provide supporting infrastructure for the digital economy. Eastern Indonesia is getting more attention to equalize access to digital business. This is to reduce inequality in the acceleration program. The studies conducted (Bican & Brem, 2020; Fraccastoro et al., 2020) underlined that good infrastructure will accelerate the improvement of the digital economy. So (Bican & Brem, 2020) reaffirms that the fundamental basis of digital business is supporting infrastructure. The state must be present to provide space for the provision of such infrastructure.

A. Governance

The state is not only here to provide infrastructure needs, but must also guarantee a strong digital ecosystem. Digital cultural behavior in the ecosystem must be created properly which is also supported by infrastructure. This culture is also accompanied by a policy from the finance ministry by issuing retail Government Securities (SBN). This policy is in response to the demographic map of female and millennial investor dominance.

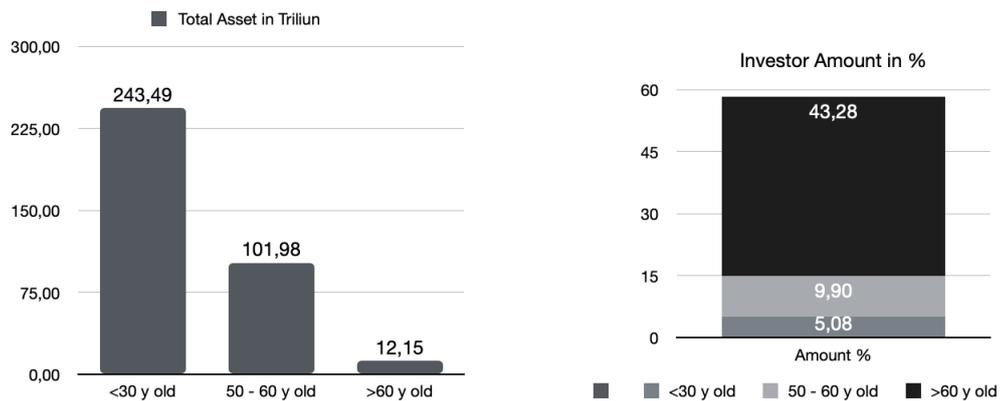


Figure 2 Digital Asset Owner
 Source: Ministry of Communication and Informatics

The graphic illustration above shows that millennial assets are much larger than the adult population. Even though the total assets owned by millennials are only IDR 12.15 trillion, the number of millennials who own these assets is 43.28% of the total investors. Millennials have a higher awareness than adults. This shows that millennial literacy towards investment awareness is higher. In addition, millennial behavior when connected with digital financing has a higher awareness. This reinforces research (Perez-Montiel & Manera, 2021) that millennials with higher education will cultivate wealth through investment. The state comes by issuing retail SBN in digital form. This makes perfect sense considering that the number of investors from millennials is much larger. Even though the total asset value is not as large as that of adults (mature), this remains a great potential for the development of digital business and financial inclusion. This is considering that Indonesia's population has reached 270 million people with a composition of more than 30% of whom are millennials. So that from an involvement perspective, the state has come up with a policy to increase access to financial inclusion through digital business in the case of retail SBN issuance.

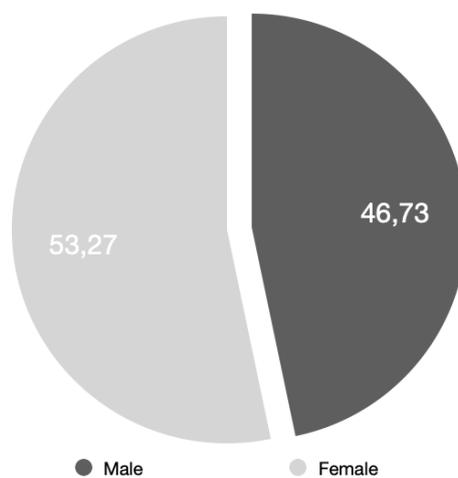


Figure 3 Gender of Digital Asset Owner
 Source: Ministry of Communication and Informatics

The graph above shows that women have a tendency to own more digital assets. Studies (Badal & Harter, 2014; Ocampo Castillo & Maria del Socorro, 2019; Prügl & True, 2014) reinforce the notion that mentally, women have a trustworthy and savvy investor mindset. In addition, the mindset of women is considered to be smarter in making decisions in investing in securities. From a leadership perspective, research (Bornman, 2019; Kelan, 2013; Sims et al., 2017) reveals that the conservative mindset that women have in investing is a manifestation of risk mitigation. Women are more careful in making investment decisions.

Meanwhile, the development of the digital economy cannot be separated from the increase in income for the millennial generation. The millennial generation already has above average income than before. This increase in income is also higher when they also want to develop their income into the form of investment. Their investment income is channeled into digital financial sectors or instruments or in the form of digital assets. Research (Ningtyas & Wafiroh, 2021; Rahayu et al., 2022) reveals a change in the behavior of the millennial generation in treating their income. They have a tendency to reduce the consumptive culture and replace it with productive spending. Productive spending for the millennial generation is to divert spending budgets into digital asset investments. This research found the fact that the millennial generation currently has an income of over IDR 10 million. The table below shows the average income of digital asset owners in Indonesia.

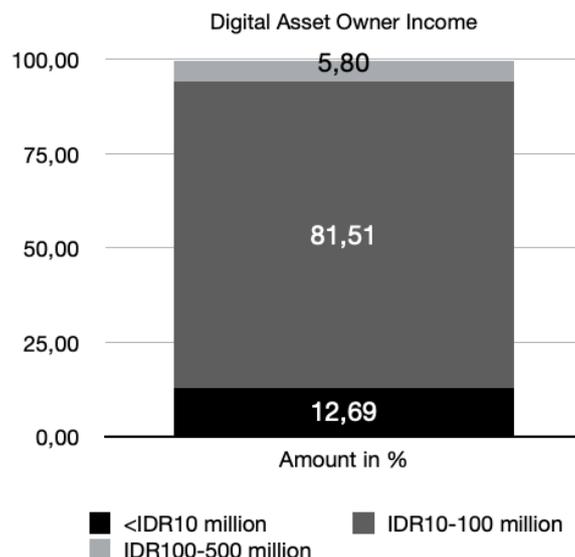


Figure 4 Digital Asset Owner Income
 Source: Indonesian Central Securities Depository

The graph above shows that the most digital asset owners are those who have an income of over IDR 10 million. Residents with this income (Rp. 10 million) have the awareness to secure their assets in digital form. This awareness is not only limited to securing assets, but also developing them. Residents with incomes above IDR 10 million are those who occupy the middleclass economic stratification. Studies (Abdullah Bindabel & Salim, 2021; Dhawan & Mehta, 2019; Nurhayati & Silvi, 2019) reveal that the motive for saving the middleclass economy apart from securing their assets also wants to develop it. So that investment behavior in this group has a more aggressive tendency. Their aggressiveness is triggered by efforts to develop capital in a relatively short time. So, their

investment target is a digital investment product with a character appropriate to today's millennial age. Meanwhile, those who are mature who have an income of more than IDR 100 million behave more conservatively in managing their digital assets. They put digital assets into safer production sectors in the long term. This group is those who already have a settle business with high wealth value in the production sector. This is different from the millennial generation with an income of less than IDR 10 million. Research (Rahayu et al., 2022) reveals that this group is still focused on the distribution of needs budget posts. There are still relatively few posts for this group of investments, because they do not have sufficient knowledge and literacy about investing.

B. Digital Economy and Financial Inclusion

The ability to access financial service institutions is of particular concern in the national economic recovery strategy. Financial inclusion is a condition of a person's ability to access financial service institutions to make decisions. Research (Chuc et al., 2022; Ozili, 2018) reveals that the millennial generation's ability to access financial institutions can increase the decision to engage in financial inclusion. On the other hand, there is a trend of increasing access to financial inclusion from year to year. Based on the National Financial Inclusion Survey by the Secretariat of the National Council for Financial Inclusion Bank of Indonesia 2021, it was found that city dwellers are still better at financial inclusion literacy. The data is shown in the graph below.

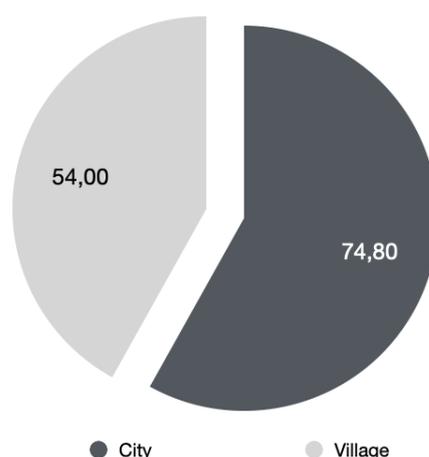


Figure 5 Percentage of Financial Inclusion Account Holder

The graph above shows that 74.8% of the city's total population has an account for access to financial inclusion. In contrast, of the total population living in rural areas, only 54% of them have financial access accounts. So that the disparity between the owners of financial accounts between villages and cities is 20.8%. The literacy level of urban residents towards financial inclusion related to their transaction needs (urban residents) is much higher than that of rural residents. These needs are the excesses of a lifestyle from the development of digital business.

Meanwhile, from the side of the island of Java and outside Java also show a slightly different demographic. The following graphical data describes the demographics of financial inclusion account holders based on their place of residence in Java and Outside Java.

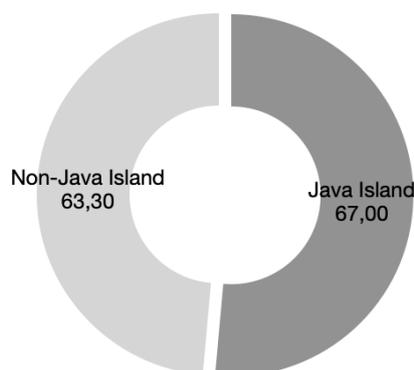


Figure 6 Account Owner Demographic

Based on the graph above, it shows that the number of financial inclusion account holders in Java is 67% of the total population. While outside Java, the total is 63.3% of the total population. The two conditions are similar in terms of total processing. So that it can be concluded that the population who have literacy towards financial inclusion has started to be high or more than half of the population. The need for access to financial inclusion is also inseparable from the increasing need for digital transactions. This is also reinforced by the value of e-commerce transactions in 2022 in Indonesia worth Rp. 536 trillion, an increase of 31% from the previous period. This is also in line with the circulation of electronic money transactions in 2022 in the amount of IDR 32 trillion. This amount has experienced a significant increase throughout 2022 by the end of the year reaching IDR 360 trillion.

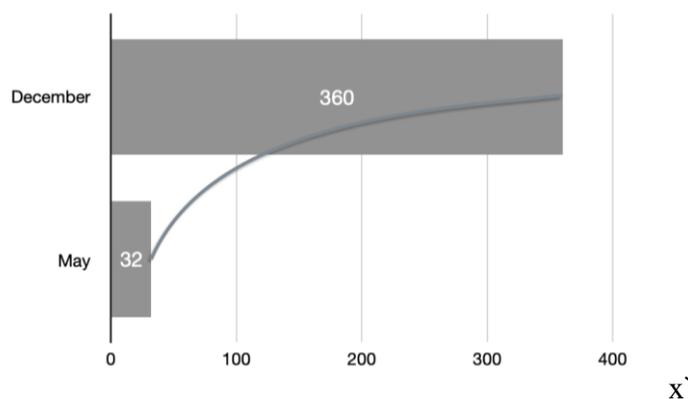


Figure 7 e-Transaction Amount

The increasing condition at the end of 2022 was triggered by an increase in the transaction value of digital banking services reaching IDR 51 trillion. The massive increase in digital transactions is a logical consequence of the fiscal stimulus provided by the government. The fiscal stimulus provided by the government is to move the micro-economic sector. Furthermore, the government also provides fiscal stimulus with policies to strengthen the digital ecosystem. This aims to increase the capitalization of digital banking service products. This easy access to financial inclusion makes it easier for micro-businesses in rural areas to make transactions, both sales and purchases. This ease of access to finance further speeds up the transaction process resulting in an increase in the micro-

economic side. The National Economic Recovery Strategy is increasingly showing positive indications with increasing financial transactions in micro businesses. The PEN strategy for 2022-2023 focuses on the creative industry sector so that a supporting digital ecosystem must be properly prepared.

The growth of trade transactions using financial inclusion is also an indication of PEN's success. Based on the release (Bank Indonesia, 2022) reveals there is a tendency for digital transactions to increase. These digital transactions use more e-money facilities besides digital banking. In May 2022, the transaction growth was recorded at 32.25% yoy. Meanwhile, digital banking transactions in the same period (May 2022) grew by 20.82% yoy.

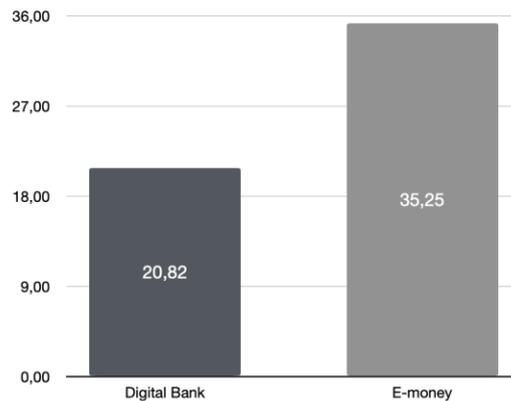


Figure 8 Digital Transaction Growth

The graph above confirms the phenomenon of growth in digital and banking transactions. This is as a result of increasing online shopping from the public. This growth has also finally become commonplace when the number of e-commerce visitors in 2022 reaches 157 million visitors. This data was only recorded for three months from January to March 2022. Based on reports from (Behera, 2020; Dianari, 2019; Irmawati, 2011) the transaction value of e-commerce platforms in Indonesia is expected to increase exponentially in 2025. The increase is estimated at US\$137.5M in the year. Exponential growth can be seen in the graphic illustration below:

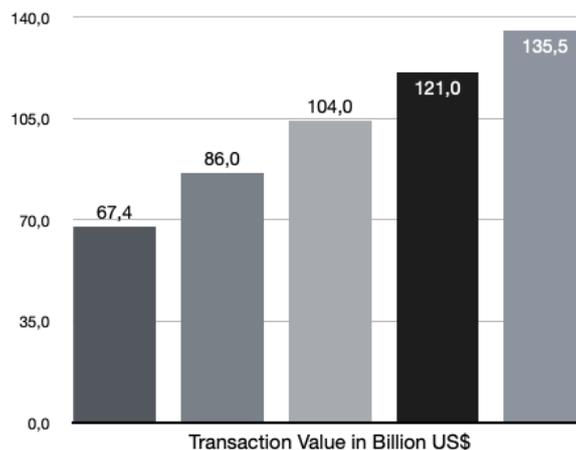


Figure 9 e-Commerce Transaction

Based on the graph above, the biggest increase will occur between 2021 to 2022 of 20%. This is based on the transaction value from 2021 of US\$67.4M, increasing significantly to US\$86M. This increase was triggered by the increasingly massive digital transactions made through e-commerce. This is a manifestation of PEN's success in terms of increasing digital economy and financial inclusion. This sector grows depending on digital financing infrastructure. The more adequate and easy access is provided, the sector will continue to grow and develop. So that community involvement in financial inclusion is one of the keys to PEN's success.

The above study also provides strengthening evidence that the National Economic Recovery strategy model using the Digital Economy and Financial Inclusion has a positive impact on improving the economy. The three synergized aspects (government, population, digital economy/financial inclusion) are the fundamental pillars of the post-pandemic economic recovery strategy. The large number of diverse demographics of Indonesia's population is a tremendous market potential. Furthermore, the digital economy that is developing in Indonesia is able to grow faster because apart from being supported by the demographic advantages of the population, the synergy of the three aspects above is also supported. Public involvement in every digital transaction and access to financial services is also a driving force for increasing financial and banking transactions. Ultimately the success of PEN is driven by the adoption of a digital platform business strategy model and increased access to financial inclusion.

4. Conclusion

The National Economic Recovery Program (PEN) remains a special concern and has been the subject of several studies. This study shows that the rapid growth of Indonesia's digital economy cannot be separated from government incentives in the PEN program. On the other hand, the digital economy ecosystem offers access to more digital financial transactions. Financial inclusion in this study refers to an increase in financial transactions in digital trade. By focusing on these two aspects (digital economic and financial inclusion), the growth of the digital trade business is also a positive form of the success of the PEN strategy. In addition, the financial inclusion strategy is one of PEN's best decisions from a management perspective. The government's PEN strategy is also a manifestation of digital business theory centered on start-ups.

The limitation of this study is that it is subject to PEN only in Indonesia. In contrast to previous research which generalized economic recovery strategies in a region (Southeast Asia) which has the same pattern and model, namely the creative industry. However, the generalization of this research is that the PEN program does not focus on the creative industries, but rather on the integration of the digital economy and finance. Both are forms or manifestations of post-pandemic changes in the corporate landscape.

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