The Digital Economy's Impact on Middle-Class Dynamics in Southeast Asia: A Case Study of Indonesia

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Abstract

The digital economy has become a major driver of social and economic transformation in Southeast Asia, especially in Indonesia. These changes affect various aspects, including consumption patterns, social interactions, and economic opportunities for the middle class. However, there are still major challenges related to inequality in access to technology that exacerbates social inequality. The purpose of this study is to analyze the impact of the digital economy on the dynamics of the middle class in Indonesia, with a focus on the socio-economic changes that occur due to digitalization. This study uses a qualitative approach by collecting data from previous studies and other relevant sources. The collected data will be analyzed to produce findings explaining the relationship between the digital economy and the middle class in Indonesia. The conclusion of this study shows that the digital economy opens up new opportunities for the middle class, but also creates inequality in access that needs to be addressed. Digital infrastructure and technological literacy are key to reducing this gap. With the right policies, the digital economy can be a tool to drive inclusive growth and social welfare.

Keywords: *Digital Economy, Middle Class, Indonesia.*

A. INTRODUCTION

The development of the digital economy has become one of the main drivers of economic transformation in various countries, including the Southeast Asian region. In recent decades, advances in information and communication technology have created new opportunities for different economic sectors, including trade, services, and manufacturing (Zhang et al., 2022). In Indonesia, one of the most populous countries in the region, the digital economy has played a significant role in accelerating economic growth and creating a business ecosystem that is increasingly connected globally. This development, supported by the widespread adoption of digital technology, has brought about significant changes in the structure of society, especially in the dynamics of the middle class (Qoriawan & Apriliyanti, 2023).

The middle class in Indonesia has become one of the segments of society most affected by the digital economy. As a group with relatively high purchasing power, the middle class is important in supporting domestic consumption and spurring national economic growth. However, the impact of the digital economy on this class

is not only limited to the consumption aspect (Miranti et al., 2022). Changes in work patterns, skills, and access to technology have created new challenges and opportunities that affect their social mobility, aspirations, and lifestyles. This phenomenon is increasingly relevant amidst changes in the increasingly competitive and integrated global economy (Jaiswal et al., 2024).

One of the main drivers of this transformation is the emergence of digital platforms that support economic activities, ranging from e-commerce to application-based services. In Indonesia, these platforms have opened up access for individuals and groups to engage in previously unreachable economic activities, such as e-commerce, digital financial services, and technology-based transportation (Morepje et al., 2024). However, while these platforms offer the potential to improve economic well-being, not all groups in the middle class can enjoy these benefits equally. Challenges in terms of access to digital infrastructure, technological literacy, and the ability to adapt to change remain issues that need to be addressed (Ollerenshaw et al., 2021).

In addition, the emergence of the digital economy has also had a significant impact on the job structure. The middle class, which is often at the forefront of this transformation, is facing a new reality where many traditional jobs are being replaced by automation or disrupted by technology. On the other hand, the digital economy is also creating new job opportunities, especially in the technology and creative services sectors. These changes not only impact job stability but also the need for new skills that are relevant to the digital era. Thus, the middle class in Indonesia is not only required to adapt but also to continue to improve their capacity to remain competitive amidst rapid changes (Kaplinsky & Kraemer-Mbula, 2022).

Furthermore, the adoption of digital technology has also had an impact on the consumption patterns of the middle class. Increased access to online services has changed the way they shop, access entertainment, and obtain education and health services. This creates a new lifestyle that is increasingly digitally connected and tends to be more global. However, behind this change, there are challenges in terms of financial management and household economic resilience, especially amidst global economic uncertainty. The influence of the digital economy on purchasing power, spending patterns, and consumption priorities are important issues that affect the sustainability of middle-class growth in Indonesia (Jiang & Stylos, 2021).

On the other hand, digital inequality remains one of the main obstacles to maximizing the potential of the digital economy in Indonesia. Although the middle class has better access than other groups in society, gaps in connectivity, digital literacy, and technological capabilities remain challenges that must be overcome. This inequality has the potential to widen the gap between groups that can adapt to the digital economy and those that are left behind, even within the middle class itself. Therefore, understanding how the digital economy affects the dynamics of the middle class is important for formulating more inclusive and sustainable policies (Ariansyah et al., 2023).

As a country with the largest number of internet users in Southeast Asia, Indonesia has great potential to utilize the digital economy as a tool to drive growth and strengthen the middle class. However, this dynamic also requires a holistic approach to managing its impact on various aspects of social and economic life. This study aims to explore more deeply how the digital economy affects the dynamics of the middle class in Indonesia, both in terms of opportunities and challenges, as well as its implications for overall economic development.

B. LITERATURE REVIEW

1. Digital Economy

Since the 1990s, the term digital economy has been used and is usually referred to as the internet economy (the internet that produces economic value) to classify it as an economic and social activity resulting from information and communication technology. The term digital economy was coined by Don Tapscott in 1994 in his book entitled The Digital Economy: Promise and Peril in the Age of Networked Intelligence (Miao, 2021). In the book, it is stated that the digital economy is an economic activity based on digital internet technology. The digital economy is also called the Internet economy, web economy, digital-based economy, new economy knowledge, or new economy. Don Tapscott also explains that the digital economy has 12 attributes, namely knowledge, digitization, virtualization, molecularization, internetworking, disintermediation, convergence, innovation, presumption, proximity, globalization, and discordance (Fauzi et al., 2022).

Thomas Mesenbourg identified three main parts of the Digital Economy concept, namely e-business infrastructure which is physical equipment (hardware), programs or applications (software), telecommunications, networks, etc. Second, e-business which is a procedure for conducting a business, every activity carried out through a network that uses computers and the internet. Finally, e-commerce is how a business transaction is carried out such as product delivery activities from online transactions. In general, the digital economy or new economy is more based on intangible forms, information, innovation, and creativity, in expanding economic potential and is based on the exploitation of ideas and does not focus on material things (Mahmud et al., 2024).

According to the G20 organization, the digital economy is all economic activities whose main drivers are the use of digital information and modern information networks, and the use of information and communication technology (effectively) (Williams, 2021).

Based on the definition of the digital economy above, it can be seen that the main elements in the digital economy are the use of technology, the use of digital information, and modern information networks in trade interactions. The definition of the digital economy continues to evolve over time. This is related to the development of the increasingly widespread and popular digital economy. Several factors that influence the acceleration of the transformation of the economic sector into a digital economy are the development of information and communication

technology, globalization, and the internet (Herman & Oliver, 2023). Furthermore, the main characteristics of the digital economy are international trade activities (cross-country) and transactions that cut many intermediary chains, and distribution chains of goods and services. The existence of the digital economy makes it easy for producers to directly sell goods or services directly to consumers without being hindered by place and time (Eduardsen et al., 2023).

Indonesia holds the predicate of a country with great potential in the digital economy. This brings economic threats to the government, where one of the impacts that occurs is increasingly complex social change, starting from changes in mindset to culture due to changes in business models in various fields (Makmur, 2024).

Then, several other facts are supporting factors for the development of the digital economy in Indonesia, namely:

a. Indonesia is predicted to have an online trading market (e-commerce) of 5.3 billion for formal e-commerce, and more than 3.1 billion for informal e-commerce.
b. Indonesia is estimated to have 30 million online buyers in 2017 with a total population of around 260 million.
c. In 2025, in Indonesia, additional jobs created by the digital economy are estimated to be around 3.7 million.
d. Creating growth in small and medium enterprise (SME) income up to 80% higher than previous growth.
e. Causing additional GDP growth of 2% per year in 2023 due to the implementation of digital technology so that there is an increase in the level of broadband intervention by SMEs (Saputra, 2024).

The digital economy has many positive influences on Indonesia. Therefore, Indonesia has the opportunity to continue to develop the digital economy. High digital economic growth, innovation, infrastructure, and widespread implementation have the potential to drive national economic growth. This will also accelerate economic development and achieve sustainable growth (Aminullah et al., 2024).

2. Middle Class

Birdsall, Graham & Pettinato, who use a relative approach, define the middle class based on incomes between 75% and 125% of the median per capita income of the community. Furthermore, Easterly defines the middle class as people who are in quintiles 2, 3, and 4 in the distribution of per capita consumption expenditure or are in the per capita consumption percentile between 20 and 80 (Derndorfer & Kranzinger, 2021).

Meanwhile, according to Banerjee & Duflo who use an absolute approach, the middle class is individuals with per capita expenditure per day of US$2 - US$4 and individuals with per capita expenditure per day of US$6 - US$10. Bhalla using the same approach, defines the middle class as people with annual incomes of more than US$3,900 in purchasing power parity (PPP) measures. Ravallion, who uses a hybrid approach, distinguishes the middle class in developing countries from the middle

class in developed countries (Lappeman et al., 2021). To define the middle class in developing countries, the median value of the lower poverty line (US$2 per capita per day) and the upper poverty line (US$13) are used as the lower limit. The definition of the middle class according to the Asian Development Bank also uses an absolute approach based on consumption expenditure ranging from US$2 to US$20 per capita per day. This study was conducted using the ADB approach (Chikweche et al., 2021).

Several determining factors drive the growth of the middle class and contribute more to the development process, namely:

a. Economic growth and income distribution.
   Sustainable economic growth tends to encourage people to escape poverty and enter the middle class. Because economic growth plays an important role in reducing poverty and increasing the middle class. According to Birdsall, inclusive growth—which is characterized by growth that is conducive to increasing the size and dominance of the middle-class economy—is driven by policies that reduce poverty, namely fiscal discipline through good debt management, a fair taxation and redistribution system, low trade volatility, solid monetary policy (which results in stable and low inflation), and infrastructure improvements (Lee et al., 2022).
b. Employment and education
   There are two factors that drive the formation and stimulate the middle class, namely: (i) employment with stable wages, and well-paid with various benefits, and (ii) higher education (Winter, 2024).
c. Mobility and vulnerability
   Although the middle class is growing quite rapidly, there are parts of that group that can easily turn into poverty, especially the group of people with expenditures of around US$2 per day. This means that this group is still very vulnerable to falling into the group of poor people (Utami et al., 2024).

C. METHOD

This study uses a qualitative approach to analyze the impact of the digital economy on the dynamics of the middle class in Southeast Asia, especially in Indonesia. This approach allows for in-depth exploration of various aspects of the changes that occur, including consumption patterns, social interactions, and new economic opportunities. By utilizing data sourced from previous research results and relevant studies, this study will explore the information needed to understand the phenomenon comprehensively. The data collection process is carried out systematically, referring to trusted sources that are directly related to the issue of the digital economy and the middle class. After the data is collected, the next step is data processing and analysis to produce findings that can strengthen the research argument. Through this approach, it is hoped that the research can provide a significant contribution to explaining the relationship between the digital economy and socio-economic changes at the middle-class level, especially in the Indonesian context (Pahleviannur et al., 2022).

D. RESULT AND DISCUSSION

1. Digital Economy Development and Social Transformation

The development of the digital economy has brought about significant transformations in people's lives, especially in Indonesia. One of the main impacts is seen in changes in consumption patterns that are increasingly connected to technology. With the advancement of e-commerce platforms, digital payment services, and technology-based applications, people now have wider and faster access to meet their daily needs. The middle class, as a group with strong purchasing power, is the main segment that responds to this development. Consumption patterns that were previously limited to physical transactions in conventional stores have now shifted to practical and efficient online shopping activities. This not only affects the way goods and services are obtained, but also creates new consumption experiences that are more personal, flexible, and integrated with technology.

In addition to influencing consumption patterns, the digital economy has also brought about major changes in social interactions, especially in the middle class. Digitalization creates new spaces for communication, collaboration, and self-expression that were previously unavailable in traditional contexts. Social media and application-based communication platforms have enabled middle-class individuals to connect with wider social circles, both locally and globally. However, this transformation does not only bring benefits; it also raises new challenges, such as the fragmentation of social interactions that shift from face-to-face relationships to virtual relationships. Communication patterns that are increasingly dependent on technology can also affect the quality of social relationships, where emotional closeness and interpersonal relationships are often replaced by shallower technology-based interactions.

The digital economy not only affects consumption patterns and social interactions, but also creates new opportunities in various sectors, both formal and informal. In the formal sector, technological developments open up new jobs in information technology, digital marketing, and data analysis. Large companies and small and medium enterprises are now more dependent on technology to improve operational efficiency and reach a wider market. Meanwhile, in the informal sector, digital platforms such as marketplaces and service-sharing applications have empowered individuals to participate in economic activities that were previously difficult to reach. Technology has become a catalyst for informal workers to expand employment opportunities, increase income, and create new jobs outside of traditional channels.

Changes driven by the digital economy have also impacted the lifestyle preferences of the middle class. Increasing access to technology has shaped a more connected and integrated lifestyle with digital-based services. People's lifestyles are now increasingly influenced by the availability of technology such as food ordering applications, streaming services, and online education platforms. Preferences for speed, convenience, and accessibility are the hallmarks of this new lifestyle. However, this transformation also brings challenges in the form of dependence on technology,

which can affect how individuals manage their time, build relationships, and prioritize their needs.

The development of the digital economy has created a profound social transformation in Indonesia, especially in the middle class. These changes not only impact aspects of consumption, social interaction, job opportunities, and lifestyle but also open up new opportunities and challenges that need to be managed wisely. In a broader context, this transformation shows how technology can be a major driver in shaping social and economic dynamics, providing opportunities for progress, while demanding continuous adaptation efforts amidst such rapid change.

2. Job Dynamics in the Digital Economy Era

The dynamics of work in the digital economy era have undergone a major transformation, bringing about a significant shift in work patterns that were previously considered conventional. Automation and digitalization are the main factors driving this change, where many tasks that previously required human labor can now be performed by machines or software with higher efficiency. In the manufacturing sector, for example, robotics has replaced a large number of human workers, while in the service sector, automation through artificial intelligence technology has made it easier to manage data, provide customer service, and business analysis. This has led to a change in the structure of work, where repetitive and manual work is decreasing, while roles that require analytical skills and creativity are increasing. However, this change is not only beneficial; for some workers, especially those who lack digital skills, this transformation can be a threat to their job stability.

In addition to shifts in work patterns, the digital economy era has also brought about the emergence of new jobs, especially in the digital and creative sectors. Professions such as application developers, data analysts, social media specialists, and user experience designers are now an integral part of the modern job landscape. These jobs not only offer promising economic opportunities but also provide space for innovation and creative expression. In the creative sector, for example, the emergence of platforms such as YouTube, Instagram, and TikTok has enabled individuals to make content their main source of income. This phenomenon changes the paradigm of traditional work, where individuals are no longer limited to formal organizational structures, but can create independent careers based on technology. However, this flexibility is also accompanied by new challenges, such as income uncertainty, lack of social protection, and increasingly fierce competition in the global market.

Another challenge that arises in the dynamics of work in the digital economy era is the need to adapt to new skills that are following technological demands. Technology continues to develop rapidly, creating a need for the workforce to continue to improve their capacity. Data analysis skills, programming, digital literacy, and understanding of the latest technology are now the main requirements for many modern jobs. However, this adaptation process does not always run smoothly, especially for middle-class workers who often have limited access to technology-oriented training and education. This gap creates the risk of greater inequality, where

those with access to quality education can take advantage of digital economic opportunities, while others are left behind in the competition.

The inequality of job opportunities within the middle class is also an important issue in the dynamics of work in the digital economy era. Although the digital economy opens up many new opportunities, the distribution of benefits is not always even. On the one hand, individuals living in urban areas with good internet access tend to have an easier time taking advantage of these opportunities. On the other hand, those in remote or less developed areas often face infrastructure barriers and lack of access to technology. This inequality deepens the social and economic divide in society, where certain groups continue to experience increasing incomes and social mobility, while others remain trapped in economic stagnation.

The dynamics of work in the digital economy era reflect how technology can be a driver of major changes in economic and social structures. While bringing extraordinary opportunities, this transformation also poses complex challenges, ranging from skills adaptation to inequality of job opportunities. Therefore, efforts to manage these dynamics require a holistic approach involving education, government policies, and cross-sector collaboration to ensure that the benefits of the digital economy can be felt evenly by all levels of society.

3. The Impact of the Digital Economy on Middle-Class Economic Mobility and Stability

The digital economy has brought significant changes to the mobility and economic stability of the middle class, especially in Southeast Asia such as Indonesia. Increasing access to digital technology opens up new opportunities for middle-class individuals and families to improve their social mobility. Through e-commerce platforms, digital financial services, and business management applications, people now have more means to create additional sources of income or even develop their businesses. This access also allows individuals to access wider markets, both domestically and internationally, that were previously difficult to reach. However, this change in social mobility patterns is not always evenly distributed. Those who have easy access to technology and the internet tend to benefit more than groups who still face digital infrastructure barriers.

The impact of the digital economy is also very pronounced on the purchasing power and financial management of middle-class households. Technology has made it easier for people to make transactions, manage finances, and plan budgets. Digital financial platforms such as e-wallets, investment applications, and online banking services provide easier access to save, organize, and allocate financial resources. However, on the other hand, people's consumption patterns have also changed significantly, often leading to increased impulsive spending due to the ease of online shopping and various promotions offered. In this context, financial management becomes an increasingly complex challenge, especially for those who do not yet have adequate financial literacy. If not managed properly, the potential of the digital

economy to increase purchasing power can be disrupted by the risk of increasing consumer debt.

Amid global economic uncertainty, the economic resilience of the middle class is one of the important indicators that reflects overall social stability. The digital economy plays an important role in strengthening this resilience, for example by creating flexible work opportunities such as the gig economy or platform-based businesses. However, this resilience is often tested by global economic fluctuations that affect income stability, such as rising prices of imported goods or dependence on foreign markets. At the same time, the middle class is faced with the challenge of continuously improving their skills to remain relevant in a job market that is increasingly influenced by technology. Thus, although the digital economy offers great opportunities, the economic resilience of the middle class still requires support from proactive public policies to protect them from macroeconomic risks.

Digital inequality is one of the most crucial issues in the context of the digital economy, which has a direct impact on the gap within the middle class itself. Differences in access to digital infrastructure, such as fast internet and adequate technological devices, create a widening gap between groups of people who can take advantage of the digital economy and those who are left behind. This gap occurs not only between urban and rural areas but also within the middle class itself, where individuals or families who are more technologically literate have greater opportunities to increase their income and economic stability. As a result, the gap that emerges within the middle class can weaken social cohesion and hinder the full potential of the digital economy as a tool to support economic inclusion.

The impact of the digital economy on the mobility and economic stability of the middle class is a complex phenomenon, where significant benefits are offset by equally significant challenges. Digital technology has indeed paved the way for more dynamic social mobility and more efficient financial management, but the resilience of the middle class remains vulnerable to various external factors. Digital inequality adds another layer of challenges that require serious attention from the government, private sector, and society. In this context, the digital economy must be seen as an instrument that requires strategic management to create inclusive and sustainable benefits for all levels of society.

4. Challenges and Opportunities in Optimizing the Digital Economy

Optimizing the digital economy is a major challenge as well as a promising opportunity for economic growth, especially in Southeast Asia such as Indonesia. One of the main challenges is the digital infrastructure barrier that directly affects the distribution of digital economy benefits. In many areas, especially rural and remote areas, access to high-speed internet and technological devices is still very limited. This inequality creates a significant digital divide, where groups in urban areas with better access to infrastructure tend to be more likely to take advantage of digital economy opportunities. This barrier not only slows down technology adoption but also hampers community productivity that could otherwise be increased through digital

innovation. Therefore, investment in equitable digital infrastructure development is an urgent step to ensure the inclusiveness of digital economy benefits.

In addition to infrastructure, digital literacy is a key factor in empowering the middle class to take advantage of opportunities in the digital era. Digital literacy includes the ability to use technology effectively, understand the risks associated with the digital world, such as data security, and the ability to adapt to rapid changes in technology. Without adequate digital literacy, many middle-class individuals may be left behind in taking advantage of the potential of the digital economy, both in terms of employment, education, and entrepreneurial activities. Digital literacy also plays a vital role in reducing negative impacts, such as the spread of false information or online fraud, which can harm society at large. Therefore, training and education programs on digital literacy should be a priority to ensure that all levels of society, especially the middle class, have the skills needed to participate in the digital economy.

The great opportunity offered by the digital economy lies in the development of technology-based economic sectors. Technology has created new space for innovation in various sectors, from e-commerce, and fintech, to creative industries such as gaming and digital content production. These sectors not only contribute to economic growth but also open up new jobs that previously did not exist. With the adoption of the right technology, the middle class can be more actively involved in these sectors, both as business actors and as consumers who support the digital economy ecosystem. In addition, the potential for developing small and medium enterprises (SMEs) through digital platforms increasingly opens up opportunities for people to expand their markets without geographical boundaries. However, utilizing these opportunities requires adequate support in the form of relevant policies, infrastructure, and training.

The role of public policy is very important in creating an inclusive digital economy ecosystem. The government must ensure that existing regulations support innovation while protecting the interests of the community. Proactive policies, such as incentives for investment in technology, digital infrastructure development, and consumer protection, can accelerate the transformation of the digital economy. In addition, the government also needs to bridge the digital divide by allocating resources to support areas that are lagging in access to technology. A collaborative approach between the government, private sector, and local communities is needed to build an inclusive digital ecosystem, where all groups of society have equal opportunities to participate and benefit.

The challenges and opportunities in optimizing the digital economy show that this transformation requires a holistic and inclusive approach. Adequate infrastructure, strong digital literacy, innovation in the technology sector, and supportive public policies are key pillars that must be developed simultaneously. By addressing these challenges and leveraging the opportunities, the digital economy can be a catalyst for strengthening the middle class while creating sustainable and equitable economic growth across all levels of society.

E. CONCLUSION

The transformation of the digital economy has had a significant impact on the dynamics of the middle class in Southeast Asia, especially in Indonesia. These changes can be seen from various aspects, such as consumption patterns, social interactions, and new economic opportunities that arise due to digitalization. The digital economy not only drives social mobility but also creates new challenges, such as digital inequality that widens the gap between groups that have access to technology and those that do not. On the other hand, the contribution of technology in increasing purchasing power, job opportunities, and household financial management has strengthened the role of the middle class as a driving force for economic growth in the region. However, challenges in the form of limited digital infrastructure, unequal digital literacy, and inequality in job opportunities indicate the need for an inclusive and holistic approach. Optimizing the digital economy requires synergy between the government, private sector, and society to create a fair and equitable digital ecosystem. Policies that support innovation, infrastructure development, and increasing digital literacy are key factors in ensuring that the benefits of the digital economy can be felt by all groups, including the middle class who are the backbone of economic stability. With the right steps, the digital economy will not only be a catalyst for economic growth but also a strategic tool to reduce social disparities and improve people's welfare. The success of this transformation depends heavily on the ability of all parties to adapt to change and take advantage of existing opportunities so that the digital economy can drive sustainability and inclusivity in the long term.

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