

Indonesia's Digital Economic Policy To Increase Economic Resilience

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Abstract

The growth of information and communication technology (ICT) has changed the way people live their lives and conduct business. The era of the Industrial Revolution 4.0, characterized by the use of digital technology and the Internet of Things (IoT), has created a new economic environment known as the “digital economy.” In this context, digital economy policy becomes very important to support sustainable economic growth and improve national economic resilience. This research aims to analyze Indonesia's digital economy policy in developing the digital economy in the context of Society 5.0 and Industrial Revolution 4.0. The main focus of the research is how government policies can strengthen the national economy. This research uses a descriptive-qualitative method with secondary data collected through a systematic review. Data were collected from various scholarly sources, including relevant journals, research publications, reports, and websites. This qualitative approach generates descriptive notes and data that are integrated into the text for further analysis. When policies are implemented correctly, that is, by paying attention to and realizing the various aspects that have an impact on the policy implementation process, it will produce the maximum benefits, including the Integration, Interactivity, Transparency, Control, and Accountability (IITCA) factors. The research shows that digital economy policies have a significant positive impact on economic growth and resilience. The implementation of the Digital Economic Agreement Framework (DEFA) is expected to strengthen the MSME sector, attract investment, encourage innovation, increase productivity, and create high-quality jobs. The establishment of the Digital Innovation and Sustainable Economy Center (DISC) also plays an important role in supporting the transformation of businesses and organizations towards a sustainable digital economy. In addition, the Indonesian government has improved digital infrastructure, such as 4G networks, 5G technology, and low-earth orbit satellites, and launched digital literacy and skills programs to reduce the digital divide and strengthen economic resilience. An effective digital economy policy can be a powerful instrument to strengthen a country's economic resilience. Research results confirm that the implementation of digital economy policies not only drives economic growth but also improves social and financial inclusion. Collaboration between the public sector, the business world, and civil society is essential for the successful implementation of this policy. In addition, transparency and accountability in the implementation of digital policies, such as through the use of blockchain technology and digital payment systems, can reduce corruption and ensure that government assistance and support are well-targeted. Overall, digital economy policies play an important role in strengthening national economic resilience amid the challenges and opportunities of the digital era.

Keywords: Government Policy, Digital Economic, Economic Resilience

INTRODUCTION

The explosive growth of information and communications technology (ICT) has drastically changed human existence. The Industrial Revolution 4.0 is currently experiencing economic progress, and the Internet of Things and digital technology are used in almost all business activities. Despite its very large scale, the Internet of Things is a network of hardware and software that allows these objects to share data. Data is a type of storage that can accommodate a lot of information and be converted into various formats. The economy has grown so fast that a new civilization has emerged known as a “cashless society” – a society without cash. In this circle, consumers use credit cards, debit cards or electronic money instead of cash as a means of transaction (Mudholkar, 2020).

According to Bank Indonesia, the aim of digital transformation and policy transformation is to create an integrated data center that covers industry and has a variety of reliable analytical

capabilities. In the context of rapid economic recovery and transformation, digital transformation is expected to improve the national policy portfolio, business information research and development, and framework. It is predicted that in the process of organizational transformation, the digitalization of workflows aided by the creation of digital workplaces will develop into a comprehensive platform for strengthening institutional governance to meet the demands of dynamic and continuous organizational change.

The influence of technological progress on economic activities was conveyed by Tapscott in (Bukht, 2017) The modern economic period is known as the "digital economy". Information is presented digitally in the new economy, when data is converted into digital form and shared over many digital networks, digital speed makes compression and transmission of information possible. Information transmission is far superior to analog transmission in terms of quality. Any available information can be combined, stored and quickly accessed from any location in the world. A person's demands and needs, both in their personal and professional lives, can be met with digital technology. As we welcome this massive expansion of the digital economy, Indonesia must plan national strategic initiatives that will benefit the Indonesian people.



Figur 1. Industry 4.0 Framework and Contributing Digital Technologies
Source: (Geissbauer et al., 2016)

Digital innovation must be handled with care, but digitalization is a must. Incorporating digital innovation into long-term strategic plans is critical. Four industrial sectors dominate Indonesia's digital economy and have demonstrated success in leveraging value creation and new business strategies. The four industries are online travel, online media, on-demand food and transportation, and e-commerce (Ritchi & Aprilianisa, 2023). According to the World Economic Forum (Future of Jobs Survey 2018) four high-speed mobile internet technologies, artificial intelligence, big data analytics, and cloud computing will be widely adopted and have a significant influence on company operations.

Technological infrastructure (hardware, software, and the Internet), e-commerce (organizational procedures for carrying out computer network-based activities), and e-commerce (trade transactions via the internet) are the fundamental foundations of the digital economy (Mesenbourg, 2001). Meanwhile, fintech is a combination of management, innovation, technology and finance disciplines that can improve financial services through the use of

technology (Leong, 2018). Fintech, or financial technology, is developing very rapidly, as is e-commerce in the digital economy. E-commerce refers to the use of the Internet to manage and process data and purchase, provide or exchange goods (Deshmukh, 2019).

The description of the digital economy above can be concluded as a commercial and economic business that relies on digital technology. President Jokowi's government has set the goal of achieving economic independence in *nawacita* by seeking to activate key segments of the local economy. So that the country can be economically independent and competitive, the digital economy will be linked to the perspective of economic independence and national resilience. Nationalistic resilience, namely a dynamic condition that includes tenacity and toughness and includes the ability to develop the economic strength of a country to face and overcome various challenges, threats, disturbances and obstacles, both internal and external, that can endanger this resilience. will be closely related to the independence of the Indonesian economy (Dirjen Pothan Kemhan RI, 2019).

If seen from the geographical conception and influence of the digital economy, national security efforts must always be linked to the digital economy so that its influence can be maximized in a balanced, harmonious and compatible manner with the ideological values of the Indonesian nation. which is based on Pancasila and the 1945 Constitution. This is done in an effort to protect the entire nation and its spilled blood from negative influences as well as advancing the welfare of the nation with an economy that creates a unitary state that is sovereign, just and prosperous (Dhani et al., 2019).

RESEARCH METHODS

The main objective of this study is to determine Indonesia's policies in developing the digital economy in the context of Society 5 and Industrial Revolution 4.0 in order to strengthen the country's economy. Descriptive qualitative research with secondary data collected through a systematic review process is the methodology used. Research findings and secondary data were then analyzed. This information was collected from various scientific sources, including journals, research publications, research reports, and websites that are relevant to the problems discussed in this research. Qualitative studies use books and other papers as the main objects in the library (Sarwono, 2006). The type of qualitative research used produces descriptive notes and data that are integrated into the text (Sugiyono, 2012).

RESULT AND DISCUSSION

The Digital Revolution Of The Industrial Era 4.0

According to Bank Indonesia (BI) is different from the digital revolution in the previous period in several ways. Technological innovation, new business models, and the availability of large amounts of data drive the transformation of this era. Therefore, authorities including central banks must always be alert to potential changes in risks, opportunities, and demands. The trend of digitalization in various aspects of life is one of the characteristics of the digital revolution in the Industrial 4.0 era. The increasing power of computers and accessibility to various digital technologies that are the cornerstone of invention have driven the acceleration of technological innovation. For most users in this period, who are digital natives, various technologies, including Applied AI, Cloud and Edge Computing, Big Data Analytics, Digital-trust Technology, Distributed Ledger Technology (DLT), Quantum Computing, and Virtual Reality, can offer innovative solutions.

One of the key elements that contributes to strengthening national security is the implementation of public policy in the defense sector. When policies are implemented correctly, namely by paying attention and being aware of the various aspects that have an impact on the policy implementation process, it will produce the greatest benefits, including the factors of Integration, Interactivity, Transparency, Control and Accountability (IITCA) (Prakoso, 2016).

The First Policy Indicator is Integration

(Kemenko Perekonomian RI, 2023a) shows that Indonesia's foray into the digital economy has enormous potential, and that the digital economy will become a major issue in 2023 as a result of Indonesia's momentum as chair of ASEAN. The ASEAN region's predicted potential for the value of the digital economy to increase to US\$330 billion by 2025 and then jump to US\$1 trillion by 2030, with a third coming from Indonesia, also supports Indonesia's potential in the digital economy. With the implementation of the Digital Economic Agreement Framework (DEFA), this figure will further increase. The first round of discussions under the DEFA is scheduled to begin at the end of 2023 and is expected to be completed by 2025. The DEFA was officially launched in September. A new era of regional digital economic integration will be ushered in by the DEFA. The agreement is expected to strengthen the MSME sector, attract investment, encourage innovation, boost productivity, and generate high-quality jobs. In Batam's Nongsa Digital Park, the government has offered retraining and reskilling programs for digital skills that include the promotion of a Digital Hub or Digital Special Economic Zone (SEZ). A number of data centers are invited by the government to join the SEZ. In addition, Indonesia encourages the establishment of co-working spaces as a means of enabling the younger generation to start running businesses in the ecosystem of the future. The government also established the Digital Innovation and Sustainable Economy Center (DISC), a physical and virtual hub that enables businesses, academic institutions, and organizations to transform their operations towards a sustainable digital economy. As one of the efforts to support Indonesia's economic resilience and strength in ASEAN 2023, this policy is the result of collaboration between the Coordinating Ministry for Economic Affairs and the Economic Research Institute for ASEAN and East Asia (ERIA).

The Second Policy Indicator is Interactivity

(Kemenko Perekonomian RI, 2023b) The digital economy has developed into one of the pillars of national economic stability in the face of various global issues today. The value of Indonesia's digital economy is estimated by Google Temasek, Bain & Company to reach USD 77 billion in 2022, growing 22% (yoy). By 2025, the value is expected to almost double to USD 130 billion. Seeing the enormous potential of the digital economy, one of Indonesia's goals as chair of ASEAN 2023 is digital transformation. Therefore, the government continues to encourage the growth of the digital economy by increasing innovation and policy synergy. Expanding the 4G network, introducing 5G technology, using Low Earth Orbit Satellites, and conducting a number of initiatives and programs that can support community interaction in utilizing digital technology-such as expanding access to financial services or inclusive finance to increase economic resilience-are some of the concrete steps the government has taken to strengthen digital infrastructure. Along with the impending demographic bonus, the Government is also working to address the challenges of the digital talent and literacy gap through various programs such as the Pre-Employment Card Program, the National Digital Literacy Movement, the Digital Talent Scholarship (DTS), the Digital Leadership Academy (DLA), and the Sea Labs Academy. In addition, fostering trust and innovation in areas such as digital payment systems and public security protection can be an important part of the government's efforts to accelerate the digital economy. The form, medium, function and scale of interactive digital media projects vary widely, which naturally impacts the number and cost of development teams. A number of elements, including the type of interaction required, the functionality needed, the level of

flexibility, the database, and the amount and type of material contained, affect the size of the budget or the number of teams tailored to the developer's needs. Understanding media as content is an essential skill for creating interactive digital content.

The Third Policy Indicator is Transparency

in the digital era, characterized by the rapid advancement of information and communication technology, is the third sign. Advances in information technology have always had an impact on the general demand for high-quality and open public services. In the digital era, transparency has turned into a necessity for effective and moral governance. In this context, transparency is defined as the government's openness to data that can be accessed by the general public. The public will find it easier to react, monitor and assess government performance with this information disclosure. The public's need for openness is a means to hold public officials accountable. *UU No. 14 Tahun 2008* on Public Information Disclosure embodies the public's desire for information disclosure. According to the explanation of the law, the public's ability to access information in accordance with laws and regulations is an important component of transparent state management. The right to information is very important because it will make state administration more responsible because it is more transparent to the public. One form of information disclosure that can affect the government's capacity to carry out good governance is the Public Information Disclosure Law. Building a reciprocal relationship between society and government is facilitated by transparency in the way government responsibilities are carried out. Transparency has several significant benefits, such as reducing the likelihood of corruption, simplifying the process of determining the advantages and disadvantages of a policy, and increasing the accountability of government agencies in delivering public services. For example, by using e-budgeting, we can determine whether the costs incurred for a program or activity are in line with the results. For digital economy policies to improve national economic resilience, the public can evaluate whether offers in purchasing products or services are available through e-purchase.

The Fourth Policy Indicator is Control

The government continues to be dedicated to supporting the growth of the digital economy in Indonesia. In addition to providing legal certainty and protection for people in doing business, a number of strategic steps are designed to create space for the growth of digital commodity innovation companies. One of them is crypto asset trading. To enable 25 business actors to transact in the physical market of crypto assets, Bappebti granted licenses in the form of registration marks to these organizations in 2022. Up to 383 different forms of crypto assets are traded in the real market, according to Bappebti's determination. The supervision of cryptocurrencies has moved from Bappebti to OJK. One other indication of the growth of the digital economy is the noteworthy performance of Commodity Futures Trading (CFT). The notional value of PBK tends to increase nowadays. With an average monthly transaction value of IDR 4.68 trillion, the total transaction value for the period January to November 2022 was IDR 51.55 trillion. When compared to the overall transaction value of January-November 2022 with the same period in 2021 which amounted to IDR 21.51 trillion (YoY), there was an increase of 139.6%. Bappebti not only oversees physical digital gold trading, but also crypto assets. Bappebti not only oversees the physical digital gold trade, but also crypto assets. The rapid development of physical digital gold trading in Indonesia and the need to meet public demand are the driving factors behind the regulation of this activity. Regulation of the Minister of Trade *Nomor 119 Tahun 2018* on the General Policy for Physical Trading of Digital Gold on the Futures Exchange is the legal basis for digital gold trading. Two futures exchanges, two clearing houses, two gold depository managers, four digital gold physical traders, and one digital gold trading broker are some of the institutions involved in digital gold physical trading that have licenses from Bappebti. Digital gold physical trading transactions from January to November

2022 did not show any on-exchange transactions; instead, they were all off-exchange transactions. The volume and value of transactions have grown along with the development of digital gold physical trading activities outside the exchange. As such, government oversight or control can contribute to increasing a country's economic resilience to the explosive growth of the digital economy.

The Fifth Policy Indicator is Accountability

The Micro, Small and Medium Enterprises (MSMEs) sector plays a crucial role in the Indonesian economy. MSMEs absorb 97% of the workforce in the country and contribute 61% to the Gross Domestic Product (GDP), which is worth around IDR 8,573 trillion. Seeing the significant economic contribution of MSMEs, the government continues to pay great attention to the growth of this sector. One of the government's ambitious targets is that by 2024, 30 million MSMEs will be digitally connected. However, currently only 24% of all MSMEs use digital technology to sell their products on various e-commerce platforms. Indonesia has great potential in the development of the digital economy, projected to reach USD 124 billion by 2025, according to research from Google, Temasek, and Bain. The digitalization of MSMEs not only facilitates collaboration with various financial services products, especially in the distribution of People's Business Credit (KUR), but also opens up greater opportunities for market penetration and increased business efficiency. Commercial banks are now developing digital banking that can be utilized by the MSME sector to digitize finance. According to a CORE poll, the implementation of the digital ecosystem has increased the average revenue of 70% of MSMEs by 30%. The MSME business index increased to 109.4 in the second quarter of 2022, based on Bank BRI's MSME Business Activity Survey, indicating that MSME players are increasingly confident in developing their businesses. As of the end of July 2022, 4.4 million debtors have received KUR disbursements totaling Rp 209 trillion or 56% of the 2022 target. In addition to financial support, the government also offers various conveniences such as electronic permit registration, simplification of export certification and standardization, access to financing and guarantees, and preferences in the procurement of government and state-owned goods and services. All of these initiatives aim to improve the resilience of the national economy and maintain government accountability for digital economy policies (Kemenko Perekonomian RI, 2022).

To strengthen economic resilience through the digital economy, the government issued several policies to ensure accountability in the distribution of assistance and financing to MSMEs, using blockchain technology to record every transaction that occurs. This will reduce the risk of corruption and ensure that the assistance is right on target. The next policy is the development of a real-time digital audit system to monitor and evaluate the performance of MSMEs that receive support from the government. This system will provide accurate and reliable data for better policymaking. The government also issued a QRIS (Quick Response Code Indonesian Standard) payment system policy. QRIS is a national QR code standard developed by Bank Indonesia to facilitate fast, easy, and secure digital payments. The integration of QRIS in the MSME digital ecosystem has several significant benefits that can improve economic resilience and government accountability. The use of QRIS by MSMEs increases accessibility and financial inclusion. By using QRIS, MSME players can receive payments from various e-wallets and digital banking applications with just one QR code. This eliminates the need to have multiple means of payment, which was previously an obstacle for many MSMEs. This increased accessibility allows more consumers to transact with MSMEs, increasing their sales volume and revenue. QRIS then facilitates transaction accountability. Every transaction made through QRIS is digitally recorded, making it easier to track and record finances for MSME players. This centralized and well-documented transaction data can be used by the government to monitor the development and performance of MSMEs in real-time. In addition, this policy helps minimize

fraud and corruption and ensures that the support and assistance provided by the government are well-targeted. The government also implements strict cybersecurity standards to protect data and transactions from cyber threats

CONCLUSION

The importance of implementing digital economy policies as a tactic to enhance a country's economic recovery capacity. The results show that the digital economy has a major beneficial effect on economic growth and resilience. With the implementation of the Digital Economic Agreement Framework (DEFA) as an integration policy issued by the government, it is expected to strengthen the MSME sector, attract investment, encourage innovation, boost productivity, and generate high-quality jobs. The government also established the Digital Innovation and Sustainable Economy Center (DISC), a physical and virtual center that enables businesses, academic institutions, and organizations to transform their operations towards a sustainable digital economy. The GoI issued interactive policies to continue driving the growth of the digital economy through infrastructure upgrades such as 4G networks, 5G technology, and low-earth orbit satellites, as well as digital literacy and skills program initiatives to address the digital divide and strengthen economic resilience. In addition, policies that support innovation in various fields, including digital payment systems and public security protection, are an important part of the government's efforts to accelerate digital transformation and tap the huge potential of the national digital economy. The Indonesian government emphasizes the importance of transparency in the digital era by implementing Law No. 14/2008 on Public Information Disclosure, which allows the public to access government data to improve good governance. Transparency policies such as e-budgeting and e-purchase demonstrate the government's commitment to reducing corruption, simplifying policy evaluation, and ensuring that public spending matches expected results. The Indonesian government, through Bappebti and OJK, strengthened the supervision and regulation of trading in crypto assets and physical digital gold to create a safe and orderly business environment, supporting the growth of the digital economy. These policies include trade licensing controls, strict supervision, and a clear legal foundation, all of which contribute to improving national economic resilience amid the rapid development of the digital economy. The Indonesian government is focusing on the digitization of MSMEs through policies such as the implementation of the QRIS payment system and the use of blockchain technology as one form of policy to improve the accountability and security of financial transactions. These measures, along with the development of digital banking and real-time audit systems, aim to strengthen national economic resilience and ensure that government support and assistance are well-targeted.

Resilience in economic crises The adoption of digital technologies can reduce a country's vulnerability to financial crises by facilitating rapid and smooth corporate change and offering creative solutions to new problems in the economy. Social and financial inclusion For all segments of society to benefit from digital economy policies, social and financial inclusion must also be considered. It is important to remember that collaboration between the public sector, businesses and civil society is necessary to effectively implement digital economy policies. In addition, such policies should strike a balance between encouraging economic expansion and mitigating harms such as privacy and data security concerns. Overall, this study shows that effective digital economy policies can be a powerful instrument to strengthen a country's economic resilience in the face of the opportunities and difficulties posed by the digital age.

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