



Digitalization as an Effort to Increase National Resilience in the Economy

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Abstract. Global developments lead to the use of technology in all departments, including business departments that need to use digital technology in all aspects and business activities. Indonesia is one of the countries that is rapidly adapting in the field of economic digitization. The purpose of this journal is to find out the development of Indonesia's digital economy and the threats posed from the perspective of national defense. The digital economy has business resilience and can have a positive impact on economic growth. This research shows that the digital economy is an economic sector that continues to grow rapidly in the future era. Therefore, there is a need for the availability of digital economic data that can be accessed by experts, so that they can provide more advanced thinking and can play a role in business resilience, and have a positive impact on further economic development.

Keywords: digitalization · digital economy · digital technology

1 Introduction

Digitization is the transfer of documents and data from analog format to digital form. The development of social media currently has an impact on the progress of the community in various sectors, one of which is the economic sector. [1] Tapscott (1996) argues that the notion of the digital economy is a form of change in the socio-political and economic system of intelligence space, Zimmerman (2000) explains the global impact of information and communication technology not only on the internet but also macro and microeconomics, Encarta Dictionary (2017) explains that the digital economy is business transactions that exist on the internet, while according to Masenbourg (2001) the basic pillars of the digital economy are technology infrastructure, e-business, and e-commerce.

The development of economic digitalization is certainly a new form of economic development in a country because the existence of digital media and internet technology currently encourages a significant increase in the lifestyle of the world community which also has direct implications for the change in the economic sector towards digital. This

is an important part considering that the economy is the main focus of a country's running and encourages widespread improvement in the quality of life of the people. The development of the digital economy can be seen in the existence of various companies that use a digital base (e-commerce, e-banking, startups, the digital industry, and so on). Indonesian startups grew from 1,400 in 2017 to 2,200 in 2019—this figure puts Indonesia 2nd in Asia and 5th in the world after the US, India, UK, and Canada, as reported by the Startup Ranking website (2020). [2] In addition, it is projected that the potential of e-commerce in Indonesia in 2022 will reach 55 billion to 65 billion dollars. The impact will be felt on the absorption of labor, including the female workforce [3].

This is also driven by the existence of a study by Google, Temasek, Bain & Company (2021) showing that the investment value of Indonesia's digital economy throughout Q1-2021 was 4.7 billion USD and has exceeded the highest value for the last four years. This achievement makes Indonesia the most popular investment destination in Southeast Asia, surpassing Singapore. In addition to the investment, Indonesia also has various potentials that can strengthen opportunities to accelerate the development of the digital economy. In 2021, the value of Indonesia's e-commerce transactions managed to reach IDR 401.25 trillion, with a transaction volume of 1.73 billion. [4] The existence of this great potential is what drives Indonesia to become a country that has a great opportunity to improve its economy through digitalization.

The presidential government has goals related to economic ideals which want to realize economic independence through efforts to move strategic sectors of the domestic economy. The digital economy will be linked to the perspective of economic independence and national resilience which aims to maintain the nation's economic competitiveness. [1] Economic independence is an attitude that everyone should have. Independent does not mean self-regulating, self-directed actions, or not depending on others. An independent self is an interactive self that chooses and directs activities according to its own needs. Indonesia's economic independence is related to national resilience, where this dynamic condition contains resilience which includes the ability to increase national economic strength in facing and overcoming all kinds of opposition, threats, disturbances, and obstacles that can endanger national economic resilience.

Economic growth is highly dependent on energy inputs; accordingly, electricity (from any source) plays an important role in economic growth as it is a crucial input into many productive activities. [5] By conceptualizing the geographic impact and digital economy, it will realize the opportunities and benefits that can be achieved and can predict or prevent adverse impacts, then protect the nation and state from negative impacts and in advancing the welfare of the economic sector which will create a sovereign, just and prosperous nation. So, what must be done is to balance, harmonize and be consistent with ideological values based on Pancasila and the 1945 Constitution of the Republic of Indonesia. The analysis that will be used in obtaining data in this article is to use descriptive qualitative research methods by accommodating sociological data research and legislation data.

2 Discussion

2.1 Digital Economy

The Digital Economy is an economy based on electronic goods and services produced and traded by e-commerce through electronic commerce, which means companies with electronic production and management processes as well as companies that interact with partners, and customers and conduct transactions via the internet. [6] Digitalization is one of the characteristics of environmental changes in the era of globalization which is characterized by advances in technology and information, dependence, and borderless). [7] Zimmerman (2000) explains the global impact of information and communication technology not only on the internet but also macro and microeconomics. [8] A country expects to develop its digital economy markedly by increasing business or trade using the internet system as a communication medium, business-to-business collaboration, or individual-to-individual collaboration.

Along with the increasing number of old and new companies based on e-business and e-commerce, the competition is getting tougher, because it has differences from classical economics that is widely known so far. The digital economy is a business carried out through virtual media, the creation and exchange of value, transactions, and relationships between mature economic actors with the internet as a medium of exchange. [9] Companies must understand the characteristics of the basic concepts to survive and win the competition. Therefore, not many companies carry out business transformations that work well in the digital economy. This is based on the ability and strength of each company and business in Indonesia to have different levels and levels, as is known in Indonesia itself has business levels ranging from small-scale to large-scale businesses. This is what underlies that the existence of digitalization must be understood by all business fields to be able to continue to contribute and test in the current digitalization era.

The various aspects and capital that must be met to be able to compete in the digital industry are certainly diverse, including technology, human resources, capital, business partners, ease of licensing, and so on. Apart from the corporate aspect, the aspect of society as a consumer also needs to obtain great debriefing and knowledge. Society must have an open attitude towards the development and advancement of new technologies and global communications, the cycle of production, consumption, and distribution of information must be supported by the forces of the digital economy supported by technological security [10].

Big data-based digital economy, internet for all activities, artificial intelligence, robotic technology, and common sensors make economic trading faster, cheaper, and more effective. Terdapat lima teknologi yang paling potensial memicu pertumbuhan ekonomi digital di kawasan Asia Tenggara, kelima hal tersebut yaitu mobile internet, big data, internet of things, automation of knowledge, dan cloud technology. The Digital Economy makes a significant contribution to the development of small and medium enterprises (UKM) through virtual network trading services and electronic banking. The presence of transactions in the digital economy encourages changes in the mindset of individuals, and organizations, making economic transaction decisions more effective and efficient. On the other hand, the digital economy may only have a positive impact on

entrepreneurs. The positive impacts produced include an increase in revenue and sales, an increase in digital capital, marketing, and so on.

However, the digital economy also has negative impacts such as the number of automatic machines that people lose their jobs, many new internet-based jobs appear even though not many people can understand ICT. The spread of cyber-economy in the form of illegal transactions such as money laundering, drug trafficking, and hacking through internet network transactions. This is what needs to be prevented and pursued so that it does not happen, especially in companies and community businesses, because this will certainly weaken the creation of a balanced and sustainable economy, and cause economic instability in the realization of national economic resilience.

The Indonesian nation must be open to technology, but technology must not damage the national values, morals, and cultural ethics of a country. Indonesia needs to monitor and anticipate potential threats or disruptions arising from the implementation of the digital economy and prepare effective, efficient, and sustainable solutions. To build a strong nation's economy in achieving prosperity, high competitiveness, and stable growth, the Indonesian region must build infrastructure to support a digital economy. National strategies for leveraging technological advances should be consistent with user policy levels. Based on the opinion of John Naisbitt (1999) technological progress must be guided by morality and high human values.

2.2 Threats During the Digital Economy Development

Threats in the digital economy threaten cyberspace, society, and the nation. Data security is a matter of great danger for good economic data and national defense. Any data can be recorded through digital media which is all connected to one server. This is not only a threat to business people but also to the country. Digitalization does not require space and national borders become vague because economic transactions can be carried out easily across countries [11].

Threats in the Digital Economy are disruptions and cyber that threaten the lives of both individuals, societies, and countries. The biggest threat to digitalization is, where transactions are controlled by major economic players in the world. The great potential possessed by Indonesian youth is an attraction for foreign investors. Big economy companies have the high technology expertise to create important data in this country, which is used to seek their economic advantage.

The Ministry of Defense takes a strategic role in anticipating existing threats. [12] Law No. 3 of 2002 concerning National Defense stipulates that threats in the national defense system can be in the form of military threats and non-military threats in which cyber threats are also included. Cyber threats consist of violations of cybercrime laws which, if carried out widely, can threaten state sovereignty. [13] The goals of the defense economy for security in digital economic activities and the role of the defense economy when carrying out security amid promotion. Therefore, the Indonesian Ministry of defense program starts from the national defense information system. This system has the role of providing fast, accurate, and real data and information to provide security guarantees in the process of determining policy decisions.

Defense economics aims to create defense and security in digital economy activities and the role of defense economics in presenting economic security amid society. Therefore, the Ministry of Defense of the Republic of Indonesia launched the State Defense Information System Program which has a role as a provider of data and information quickly, accurately, and in real-time to provide security guarantees in the process of determining decision policies. [14] The electronic base state system policy was developed to address strategic issues in quality public services. The strategy uses Information and Communication Technology (ICT) in public service institutional management. Another strategy was implemented regarding the establishment of a National Cyber and Code Agency to ensure cyber security. Effectively and efficiently use, develop, and integrate all elements related to national cyber security. The National Cyber and Code Agency aims to protect and maintain the network of government infrastructure and the nation's ICT. All data, whether government, private, population, or industry, contribute to advancing the digital economy, competitiveness, and the cyber economy. From this goal, the government needs to do the economic aspect, namely how to guarantee a sense of security in conducting transactions through digital media. An important role in the defense economy sector is to ensure access to information for each individual, create sensitivity and awareness about cyberspace resilience and security, and guarantee data security for individuals and the Indonesian population to achieve improved capabilities for economic growth.

3 Conclusion

The digital economy is an economic and business activity based on digital technology. Economic independence is an attitude in which people can regulate, fulfill and not depend on the will of others in activities aimed at obtaining goods and services that become their needs. The digital economy has become a major threat to a country, namely the threat of cybercrime, cyber war, and the emergence of many people being scammed by hackers. The digital economy has resilience for business and can have a significant impact on economic development. With the existence of an online-based business, it can develop and increase the number and value of transactions in plain view.

References

1. G. Dhani, "Utilizing the Economic Era to Strengthen National Resilience," *Study J. Lemhannas RI*, 2019.
2. das. T. T. B. V. P. W. S. W. Kaushik, "The digital Archipelago: How Online Commerce Is Driving Indonesia's Economic Development," *McKinsey*, 2020. <https://www.mckinsey.com/featured-insights/asia-pacific/the-digital-archipelago-how-online-commerce-is-driving-indonesias-economic-development>
3. P. P. E. a. Bachtiar, "Ekonomi Digital untuk Siapa? Menuju Ekonomi Digital yang Inklusif di Indonesia," Jakarta, 2020.
4. Kementerian Komunikasi dan Informasi, "Menko Airlangga: Ekonomi Digital di Indonesia Tertinggi di Asia Tenggara," *Kominfo.go.id*, 2022. <https://www.kominfo.go.id/content/detail/41127/menko-airlangga-ekonomi-digital-di-indonesia-tertinggi-di-asia-tenggara/0/berita>

5. J. B. Sahoo, Dukhabandhu. Suryakanta Nayak, "DIGITALIZATION AND ECONOMIC PERFORMANCE OF TWO FAST-GROWING ASIAN ECONOMIES: INDIA AND THE PEOPLE'S REPUBLIC OF CHINA," Japan, 2021.
6. S. Posmaria, "The Role of the Digital Economy in Encouraging National Economic Growth," *Inspirational J.*, 2021.
7. S. J., *Globalization: A Critical Introduction*. London: Palgrave, 2000.
8. N. D. S. D. W. H. J. S. Aprilia, "PERKEMBANGAN EKONOMI DIGITAL INDONESIA THE DEVELOPMENT OF INDONESIA'S DIGITAL ECONOMY," *J. Ekon. Pertahanan*, vol. 7, no. 2, p. 147, 2021.
9. H. E.A, "Digital Information and Transformation: an Istitutional Perspektif, Information, and Organization," *J. Elsevier*, vol. 28, pp. 52–61, 2018.
10. W. A. E, "Digitalisasi Masyarakat: Menilik Kekuatan dan Kelemahan Dinamika Era Informasi Digital dan Masyarakat," *J. Ilmu Komun.*, vol. 1, no. 2, pp. 131–142, 2019.
11. Rahmawati, "Analisis Manajemen Resiko Ancaman Kejahatan Siber (Cyber Crime) dalam Peningkatan Cyber Defence," *J. Pertahanan dan Bela Negara*, vol. 7, no. 2, pp. 51–63, 2017.
12. D. Nila, "Indonesia's Digital Economy Development," *Def. Econ. J.*, 2021.
13. Kementerian Pertahanan, *Pedoman Pertahanan Siber*. Jakarta: Kementerian Pertahanan, 2014.
14. Kementerian Pertahanan, "Pusdatin Kemhan Harus Siap dan Mampu Tangkal Serangan Siber," *Kemhan.go.id*, 2019. <https://www.kemhan.go.id/2019/05/17/pusdatin-kemhan-harus-siap-dan-mampu-tangkal-serangan-siber.html>

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