

Indonesia's Digital Economic Transformation: An Opportunity and A Challenge

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ABSTRACT

In recent years, Indonesia's economy has experienced significant growth. The main phenomenon that is developing in Indonesia is the transformation of the digital economy such as electronic commerce, fintech, digital services and various segments related to the digital economy. However, this transformation also extends to other sectors such as manufacturing, healthcare, education, retail, hospitality and transportation. This transformation has changed the way of development, production and sales methods of goods and services, especially with the Covid-19 pandemic since March 2020, causing many consumers to prefer to make remote or online transactions using faster and safer payment solutions. This change in consumer behavior has led to the emergence of new business models that influence the market and change conventional businesses in various sectors ranging from retail, transportation and logistics, banking services, agricultural manufacturing, education, healthcare and media. The purpose of this research is to explore the opportunities and challenges related to digital economic transformation in Indonesia. By using the literature review research method, the result of this research is that digital economic transformation is becoming an increasingly important phenomenon in aspects of life and has an impact on global economic growth, innovation in doing business and increasing global partnerships. But on the one hand, there are challenges that need to be overcome related to regulatory issues, the lack of understanding from the public about digital development, and technological infrastructure that requires increased investment.

Keywords: *opportunities, challenges, digital transformation, digital economic transformation*

1. INTRODUCTION

It is undeniable that Indonesia's economy has experienced significant growth accompanied by the development of information and communication technology. This growth is due to the transformation of the digital economy in various sectors including electronic commerce, fintech, digital-based services and various segments related to the digital economy. Through the transformation of the digital economy that affects economic growth in Indonesia, the government must be able to see the opportunities that exist to develop and facilitate these opportunities. Some of the opportunities that arise with the transformation of the digital economy are the increasing number of internet users, increasing internet access, increasing startups, and the adoption of technology by traditional sectors such as the agricultural sector to increase productivity and efficiency. But behind the opportunities that exist, the government also faces various challenges with the increasing growth of the digital economy, namely the inequality of internet access because the internet can only be accessed in urban areas, not evenly distributed to all regions in Indonesia, the vulnerability of online data security which is easily hacked by irresponsible parties, the unintegrated infrastructure that supports internet facilities to the uneven education and training related to technical skills and data analysis (Kompasiana.com, 2023).

2. LITERATURE REVIEW

Digital Transformation Digital transformation is a new digital application that has the potential to improve business and market operations, such as improving customer experience and satisfaction, minimizing market operations to become a new business model that has not existed before (Togatorop et al., 2024, p. 18). Digital transformation is a process of digital technology and digital capabilities creating value through stimulating business models, customer experience and operational processes. Digital transformation is a change in business activities, processes,

compensation and business models to strategically utilize changes in digital technology and its impact. The purpose of digital transformation is to change customer-centric business patterns by utilizing information technology, governance, human resource strategies, leadership and culture. This digital transformation is closely related to digital innovation which focuses on changes that occur at various levels such as technology, governance, strategy, human resources, leadership and culture as well as the characteristics of information technology involving stakeholders, knowledge management to supply chains influenced by market demand.

2.1 Digital Economy Transformation in Singapore

Digital transformation is inseparable from the development of a strong and innovative digital economy such as what happened in Singapore. The development of digital transformation in the country is due to several factors, namely (Sudiantini et al., 2023, p. 22):

1. Strong technology infrastructure, such as broadband and advanced cloud infrastructure, enables companies to run complex digital applications by accessing them from anywhere at any time.
2. Pro-innovation regulations are regulations that support the development of the digital economy through regulations related to fintech innovations, such as digital payment services and blockchain technology.
3. Investment in education and training to support digital economy development
4. The public-private partnership is a collaboration between the Singapore government and the private sector in developing star-up companies to have access to the global market.

Through the development of this digital transformation, Singapore was eventually able to become a center of innovation and technology in Asia by producing well known star-up companies such as Grab, Lazada and Carousell that achieved success and were able to open opportunities for foreign investment to invest in companies in this country. From its achievements, Singapore is one of the most digitally ready countries in the world, ranking first based on the Digital Capability Index (Sudiantini et al., 2023, p. 23).

2.2 Digital Economy Transformation in Indonesia

Digital economic transformation in Indonesia has a fairly rapid development due to the following factors:

1. The growth of internet users is high, this is supported by data on internet users in Indonesia in 2020 reaching more than 170 million people or around 64% of the total population of Indonesia. From this fact, there is a great opportunity for technology companies and online businesses to create a domestic market share.
2. Pro-innovation regulation, is a policy issued by the government to support the development of the digital economy through increasing broadband penetration, providing technology investment facilities and strengthening personal data protection.
3. Investment in education and training, is a concrete action taken by the government by investing resources in education through the development of information and communication technology curriculum in formal schools and advanced training for employees.
4. Partnerships between the public and private sectors. To support the development of the digital economy, the government issued several programs such as the 1000 Digital Startups program to help startup companies grow and increase access to the global market.

2.3 Trends and Innovations in Digital Economy Transformation in Indonesia

Since the implementation of the Industrial Revolution 4.0 throughout the world, technology has developed so fast that it has been able to change the lifestyle of people who were originally manual and then changed by using digital technology such as cellphone devices, laptops and so on, making the world narrower without any distance and time. The development of technology has also penetrated the economic sector which is characterized by the growth of the digital economy which has drastically changed people's lives, which used to carry out economic activities offline, now carried out with an online system, especially after the Covid-19 pandemic. The digital economy is an economy based on advances in technology and information where distance and place can be traversed. The digital economy was first introduced by Tapscott who said that the digital economy is a social phenomenon that has an impact on the economic system and shows intelligence space features such as information, methods of accessing information, information capacity and the ability to process information (Wau et al., 2023, p. 13). With the use of the digital economy, economic activities become simpler, faster and more innovative because all types of information can be

accessed instantly without being complicated and all transactions become faster, safer and real time. The forms of digital economy that are developing in Indonesia include (Sudiantini et al., 2023, p. 24):

1. E-commerce, e-commerce continues to grow and develop in Indonesia especially during the Covid-19 pandemic.
2. Fintech, is a form of financial-based company that facilitates financial transactions.
3. Blockchain technology, is a technology used to increase transparency and security of transactions.
4. Artificial intelligence (AI), is the use of artificial intelligence used to assist several operational processes in the healthcare and manufacturing sectors.
5. Internet of Things (IoT), is a form of technology used to increase efficiency and allow users to always be connected to the devices used remotely.

3. METHODS

The research method applied in the preparation of this article is the literature review method. The literature review method is the process of searching, reading, understanding and making conclusions on published research results and theories and presenting them in an organized manner (Togatorop et al., 2024, p. 20). The data sources for this article are taken from various sources such as from national journals that have been indexed by Sinta and from web pages from trusted news sources.

4. RESULTS AND DISCUSSION

4.1 Opportunities for Digital Economy Transformation

Digital economic transformation is a change that requires a continuous process and support in the form of information and communication technology investment because through this transformation it can increase economic growth and create new opportunities for society and business. The digital economic transformation process involves several stages, namely:

1. Digitization is the process of converting physical data into digital form by scanning documents or using software.
2. Integration, is the process of integrating data into digital business systems such as CRM (customer relationship management) and ERP (Enterprise Resource Planning) implementations that allow data to be accessed and used easily.
3. Automation, is the process of utilizing technology to automate processes such as ordering, inventory and product delivery.
4. Innovation, is the process of creating new businesses or creating new marketing strategies through the development of new business models supported by existing technology.

Digital economic transformation has a significant impact on development in Indonesia as a report from Oxford Economics States that the use of information and communication technology contributes quite well to Gross Domestic Product (GDP) and creates a number of jobs in Indonesia. A 1% increase in mobile penetration is projected to contribute an additional USD 640 million to Indonesia's GDP and create 10,700 new jobs by 2020. The growth contribution of the information and communication technology sector has contributed 7.2% of total GDP. This growth is much greater when compared to the average growth of the National GDP which is only 5%, for this reason the Indonesian government pays great attention to the digital economic transformation sector as a very promising opportunity. Apart from being proven to increase National GDP, digital economic transformation also has the following opportunities:

1. Increasing efficiency and productivity, this refers to automation that can increase the efficiency and productivity of the company so as to be able to produce decisions and policies related to the continuity of the company.
2. Expanding the market, this is an opportunity for the company to grow because by utilizing e-commerce platforms or other digital platforms, it can reach the global market more easily.
3. Creating new jobs, this shows that the development of digital economic transformation can open up new jobs in the digital technology sector.
4. Increasing innovation, this means that digital transformation can accelerate the development of new innovations in the health, transportation, trade, energy, education and other sectors.

5. Development of new business models, this shows that the transformation of the digital economy allows companies to develop new business models that have never existed before.
6. Development of new products and services. Through the transformation of the digital economy, companies can be freer to develop their products and services in an innovative and attractive way.
7. Improving customer experience. Through the transformation of the digital economy, companies can leverage technologies such as big data, artificial intelligence and analytics to improve customer experience and understand customer behavior.
8. Expanding strategic partnerships. By using digital economic transformation, companies can easily conduct trade cooperation with the international world with the aim of strengthening the company's position in the global market.
9. Open research and development collaborations. Through digital economic transformation, companies can collaborate with international companies to conduct research and development of new technologies to accelerate innovation and gain a competitive advantage in the global market.

4.2 Challenges of Digital Economy Transformation

In addition to opportunities, there are also challenges that must be faced with this digital economic transformation, including:

1. Cyber security is a primary challenge in the digital economy because the increase in online transactions has opened a new gap for irresponsible parties to attack the global cyber (Budi Pramono et al., 2022, p. 3229).
2. The digital economy also brings market competition to the fore with the development of e-commerce as a tap for the rapid entry of products from other countries that can hinder the development of domestic products.
3. The development of technology in production machinery can be a threat to workers because the work they used to do can be replaced by machines.
4. The existence of digital fraud through the misuse of personal information using advanced technology.
5. The existence of plagiarism of other people's works in the form of written works, images, photos, and music supported by hacking technology intentionally (Rahayu et al., 2022, p. 3).

5. CONCLUSION

With the transformation of the digital economy that continues to grow and develop into a phenomenon that cannot be stopped and coexists with society, the author tries to provide suggestions regarding the opportunities and challenges faced with this digital economic transformation:

1. It is hoped that the government will be able to issue the right policies to support this digital economic transformation from the aspects of consumer data protection, hacking, plagiarism, and consumer privacy. The policies issued must also be able to provide fair punishment for the perpetrators of hacking, plagiarism and theft of consumer privacy data.
2. The government as a regulator is able to design a digital roadmap consisting of digital-based infrastructure development that is well managed through digital management as well. In addition, the government is able to prepare human resources who are literate in digitalization so that they are able to operate digital equipment. If these human resources have competence in the digitalization sector, this will spread to the economic activities of the community that utilize digital technology to carry out economic activities. If the economy grows rapidly through technological intermediaries, this can boost state revenues in the digital economy sector.
3. In order to improve the skills of the community and workforce in the face of this digital economic transformation, the government is expected to provide intense training and education formally, which can be in the form of the transformation of STMM Yogyakarta into the Institute Digital Nasional University (IDN-U) which is expected to become a center of excellence for the development of national digital talent and digital policy. While in the informal form, the government can form a Digital Leadership Academy, provide digital talent scholarships and a national digital literacy movement that is expected to improve education and knowledge in the digital technology sector.
4. To support the development of the digital economy and ensure its success and sustainability, the government is expected to be able to build technology infrastructure and quality internet access. In addition to preparing hardware

www.DeepL.com/pro for more information. infrastructure to build digital connectivity and 5G mobile boardbrand networks through satellite deployment, the Government is also expected to be able to prepare management and supervisory institutions to control these infrastructure procurement activities. In addition, the Government needs to issue policies or legislation that support the management and supervision of infrastructure procurement activities as a clear reference or legal basis in the procurement process and the implementation of preparing the infrastructure.

5. Digital economic transformation must be able to become a means or medium for micro, small and medium enterprises (MSMEs) as business actors using digital technology. In addition, the application of technology to MSMEs, the Government as the executor of the digital technology procurement program, must be able to apply and develop digital technology in various sectors, especially agriculture, maritime, tourism, education, health and logistics. Then, the Government must be able to develop digital startups through training, mentoring and business matching for startups and game development.
6. In order to accelerate the transformation of the digital economy, global partnerships need to be made with the aim of maximizing existing opportunities. This global partnership can move in the public service sector, transportation, logistics distribution, national defense and it is hoped that the Government will be able to form a legal basis as an umbrella policy regulation in implementing this global partnership

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