

## Redefining Indonesia's Digital Economy

Militcyano Samuel Sapulette and Pyan A. Muchtar

### Key Messages:

- Indonesia's digital economy is the largest in Southeast Asia. Coupled with a growing youth population and internet penetration, the digital economy in Indonesia could catalyse growth amid the looming economic slowdown. Despite the (still) significant dominance of e-commerce and fintech, Indonesia's digital economy is becoming more diversified.
- The coronavirus disease (COVID-19) pandemic, with its limited mobility and physical interaction, has created the momentum for accelerating the growth of the digital economy in Indonesia. The digital economy has also helped other sectors to survive and recover from the pandemic.
- In harnessing the power of the digital economy for growth, some key initiatives need to be implemented, including (i) further development of the telecommunications infrastructure, digital payment infrastructure, know-your-customer (KYC) infrastructure, and cybersecurity; (ii) improvements in business and consumers' digital literacy; and (iii) remodelling of the digital business ecosystem.

*The Indonesian digital economy is the largest and most attractive investment destination amongst the Association of Southeast Asian Nations (ASEAN) Member States (AMS). The sector has grown more than fourfold in the last 4 years and has supported other sectors. Amid the exponential growth, digital businesses are facing what is called a 'tech winter' in which start-ups are likely to experience slowdowns or even bankruptcy. In addition, although the digital transformation helps businesses improve productivity and drive economic growth, it has consequences for employment and wages, particularly for less skilled workers. While the potential of the digital economy must be continuously harnessed, some key initiatives need to be implemented to mitigate its negative effects.*

### Indonesia's Digital Economy

The Indonesian digital economy is the largest amongst the Association of Southeast Asian Nations (ASEAN) Member States (AMS). In 2021, the size of Indonesia's digital economy accounted for about 42% of ASEAN's digital economy (Figure 1). Meanwhile, the size of Indonesia's gross domestic product (GDP) is around 36% of the total GDP of all AMS. Indonesia is also one of the most attractive digital investment destinations. The total investment inflow towards the digital sector was \$4.5 billion in 2020 and \$9.1 billion in 2021 (Google, Temasek, and Bain & Company, 2022).

The strength of the Indonesian digital economy comes from its high pace of internet penetration and its large youth population, which will become more dominant in the coming years (Alisjahbana et al., 2020). Both the Government of Indonesia and the private sector have launched various initiatives to support Indonesia's growing digital economy. Such initiatives mainly come in the form of physical and digital telecommunications infrastructure, investments in start-ups (including micro, small, and medium-sized enterprises), and a general initiative to improve the ease of doing business (East Ventures, 2021).

### Digital Economy and Economic Growth

Indonesia's digital economy showed remarkable growth of 414% from 2017 to 2021. Furthermore, it has been forecast to grow by about 62% from 2021 to 2025. In just under 10 years, Indonesia's digital economy will grow eightfold (Figure 2). This is in contrast to the economic slowdown (indicated by GDP) that happened during the coronavirus disease (COVID-19) pandemic and the possible gloomy outlook of the global economy in the coming years (IMF, 2022; Sapulette and Santoso, 2021).

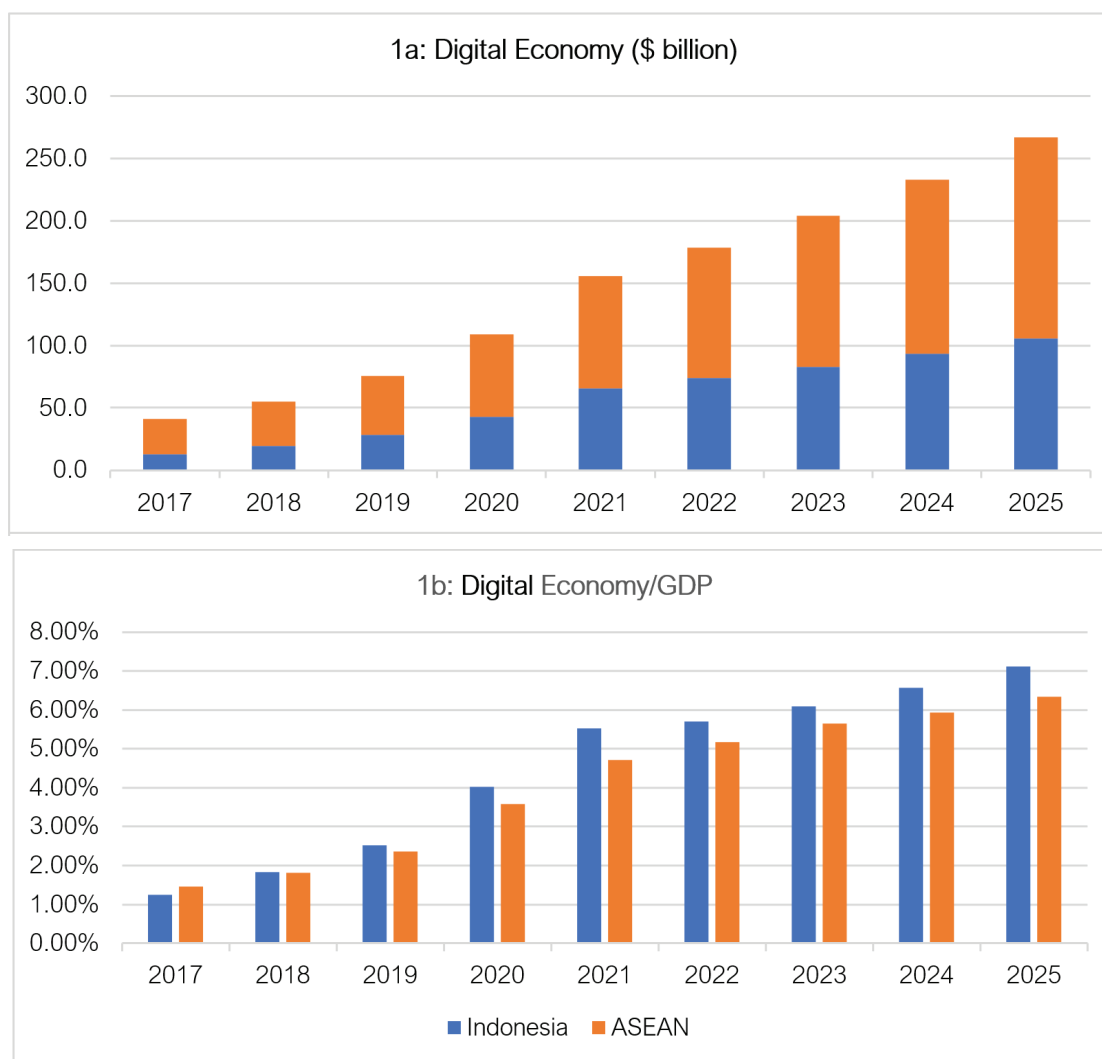
**Militcyano Samuel Sapulette**

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**Pyan A. Muchtar**

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**Figure 1: Digital Economy Outlook**



ASEAN = Association of Southeast Asian Nations, GDP = gross domestic product.  
 Notes: This figure shows the development of and outlook for the digital economies of Indonesia and ASEAN. Figure 1a shows the size of the digital economy (\$ billion), while Figure 1b shows the size of the digital economy as a percentage of total GDP. The digital economy is measured as the total revenue from eight segments: e-commerce, digital health, apps, digital media, digital advertising, e-services, smart homes, and fintech. Data for 2022 onwards are forecast.  
 Sources: Statista (2022), <https://www.statista.com/outlook/dmo> (accessed 21 October 2022); and Economist Intelligence Unit (2022), <https://viewpoint.eiu.com/data/> (accessed 21 October 2022).

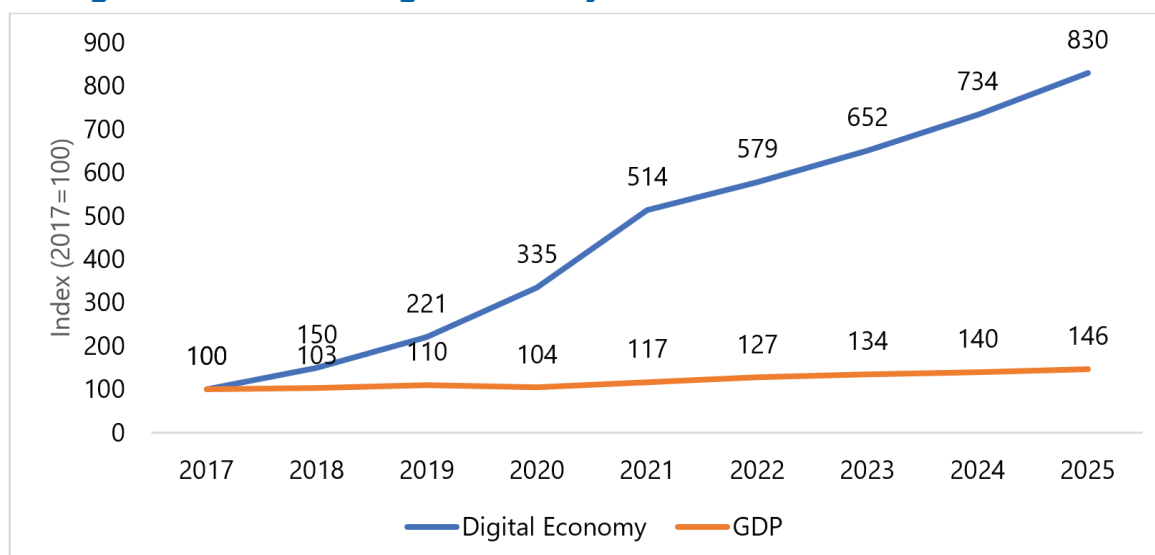
Mobility- and technology-related sectors are showing higher growth than other sectors. The technology-related sectors support mobility-related sectors, such as transportation and tourism. Furthermore, digital technology has allowed less popular tourism destinations to reach new consumers. Digital technology has also allowed small businesses to reach new consumers through online platforms, despite limited resources. The digital economy has played a key role in supporting Indonesia’s economic growth and will continue to do so.

The massive adoption of information technology amid limited mobility and physical interaction during the

COVID-19 pandemic has created momentum for the acceleration of the digital economy in Indonesia. There are also persistent shifts in the use of digital technology in various fields in response to changes in people’s behaviour, accelerated adoption of data centres, and cloud computing ecosystem technologies (Google, Temasek, and Bain & Company, 2021).

Nevertheless, some groups have not benefited from this growth, especially people in underdeveloped regions with limited access to digital technologies (EY Indonesia, 2022). Although the digital transformation helps businesses improve productivity and drive economic growth, it has consequences for employment

**Figure 2: Indonesia's Digital Economy and Economic Performance Outlook**



GDP = gross domestic product.

Notes: The digital economy is measured as the total revenue from eight segments: e-commerce, digital health, apps, digital media, digital advertising, e-services, smart homes, and fintech. Data for 2022 onwards are forecast.

Sources: Statista (2022), <https://www.statista.com/outlook/dmo> (accessed 21 October 2022); and Economist Intelligence Unit (2022), <https://viewpoint.eiu.com/data/> (accessed 21 October 2022).

and wages, particularly for less skilled workers (Ing, Grossman, and Christian, 2022), as it can increase labour market polarisation and inequality. The digital economy is still concentrated on the downstream side rather than the upstream side, leaving large untapped potential. Significant opportunities for development through the use of digital technology in sectors such as agriculture remain underutilised. Therefore, there is an urgent need to push technology adoption across groups and sectors.

### Digital Business Ecosystem

Indonesia's digital economy is still highly dominated by the e-commerce and fintech industries, and is forecast to remain so in the coming years (Figure 3). The value of Indonesian e-commerce transactions increased almost tenfold from Rp42 trillion in 2017 to Rp401 trillion in 2022, and is estimated to reach Rp536 trillion in 2022 (Bank Indonesia, 2021). The improvement in digital payment systems, especially the Quick Response Code Indonesian Standard (QRIS), contributes as an important driver for digitisation in trade. It is also important to note that the adopters of the QRIS digital payment system are dominated by micro and small enterprises.

As more sectors are becoming more connected, opportunities are wide open for various forms of digital industries to prosper. Digital technology is not new; it is the product of scientific progress. Technological advancements create opportunities for new business models. New business models with high connectivity tend to grow fast but are not profitable initially since

they focus on expanding their market first.

Amid the exponential growth, digital businesses are facing what is called a 'tech winter', in which start-ups are likely to experience slowdowns or even bankruptcy. A tech winter is likely to happen due to a shift in business perspective from high growth-high cost to more prudent growth. Thus, investment in start-ups will slow down and be more selective. This could cause inefficient start-ups to go out of business (Dewi, 2022).

Other concerns about the digital economy stem from the potential negative effect of unfair business competition. Players with abundant capital to influence the market may abuse their power to eliminate competitors. As a result the consumer surplus may diminish after the distortion of market competition.

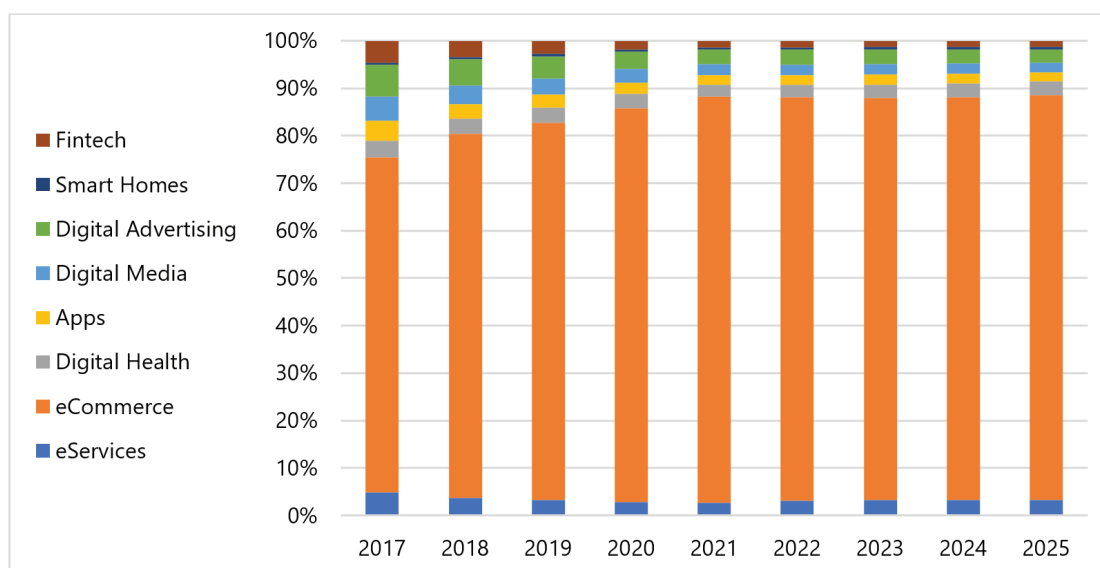
In addition, the digital economy may come with cybersecurity risks that endanger customers. In 2021, the National Cyber and Crypto Agency (BSSN) estimated economic losses of Rp14.2 trillion due to cyberattacks and reported that 22% of Indonesian firms were experiencing cyberattacks.

### What Needs to Be Done

**(1) Further development of telecommunications infrastructure, digital payment infrastructure, know-your-customer infrastructure, and cybersecurity infrastructure**

Although significant progress has been made over the years, especially in terms of telecommunications

**Figure 3: Indonesia's Digital Business Ecosystem and Outlook**



Note: The digital economy is measured as the total revenue from eight segments: e-commerce, digital health, apps, digital media, digital advertising, e-services, smart homes, and fintech. Data for 2022 onwards are forecast.

Source: Statista (2022), <https://www.statista.com/outlook/dmo> (accessed 21 October 2022).

infrastructure, further initiatives are necessary. This may come not only in the development of the (physical) telecommunications and technological infrastructure but also in terms of digital infrastructure, as it is a necessary enabler of the digital economy. To improve inclusivity, more attention should be paid to the eastern part of Indonesia and less connected groups.

Digital infrastructure that is of key concern due to its role as an enabler includes digital payment infrastructure, know-your-customer (KYC) infrastructure, and cybersecurity infrastructure. These areas must be addressed for all regions of Indonesia since there is inequality between Java and other regions (East Ventures, 2021; 2022). To date, Indonesia ranks low in terms of information and communication technology (ICT) spending, government ICT spending, and digital technology research and development. Thus, significant spending increases in the areas mentioned above are necessary.

## (2) Improvements in business and consumers' digital literacy

Consumers and businesses' understanding of technological innovation utilisation is key. Technological progress will not contribute to growth optimally if it is not understood well by both consumers and businesses. In this regard, digital illiteracy is a key challenge that must be tackled (Setiawan et al., 2020). Programmes or initiatives related to the improvement of digital literacy are therefore necessary for the future of Indonesia's digital economy.

## (3) Remodelling of the digital business ecosystem

The asymmetry of technology adoption and the unequal concentration of resources owned by economic actors has the potential to negatively impact the digital economy ecosystem. From the government side, cutting bureaucratic red tape and improving the ease of doing business are key to future growth. However, this must be done while preserving a stable business ecosystem (Alaeddin et al., 2018; Batunanggar, 2019). The government also needs to maintain healthy competition between private actors and anticipate the potential negative impacts of an oligopoly.

On the other hand, market inefficiency is one of the (if not the) main reasons for the tech winter. Thus, significant remodelling of the business ecosystem is necessary. An integration strategy through mergers and acquisitions, both for traditional and digital businesses, may be a solution, though it must be considered carefully (Sapulette, Effendi, and Santoso, 2021; Sapulette dan Dyana, 2020). Active investment in selected start-up companies may be another solution. This could be carried out by state-owned enterprises, public institutions, and the private sector (East Ventures, 2021).

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 Economic Research Institute for ASEAN and East Asia  
Sentral Senayan 2, 5th and 6th floors  
Jalan Asia Afrika No.8  
Senayan, Central Jakarta 10270, Indonesia  
Tel: (62-21) 57974460  
Fax: (62-21) 57974463  
E-mail: [contactus@eria.org](mailto:contactus@eria.org)