

The Growth of Digital Payments in Indonesia:

Harnessing Its Influence for SMEs and Indonesia's Competitiveness

Hayuningrum Citra Maharsi

doi: 10.22146/globalsouth.95934

Department of International Relations,
Universitas Gadjah Mada, Yogyakarta
hayuningrumcitramaharsi@mail.ugm.ac.id

Digital Payment System (DPS) growth plays a crucial role in supporting the country's digital economic growth. As a country representing the global south, Indonesia has an important responsibility to manage the dynamics of DPS growth, which is influenced significantly by actors from the government and private sectors. Initially, DPS was designed to provide more efficient and accessible payment services, but over time, the scope of such digital services has expanded. Nevertheless, challenges must be addressed in distributing DPS evenly, especially among MSMEs. Through the approach promoted by the Economic Asian Committee (EAC), this study aims to assess the impact of DPS growth on the digital services ecosystem in Indonesia and the dynamics of interaction between related stakeholders. Qualitative methods are used to summarize information from various sources, including journal literature and data from websites, which provide an in-depth understanding of the complexity of this phenomenon and Indonesia's efforts to improve its overall digital competitiveness. The findings in this study indicate that the Digital Payment System (DPS) offers numerous benefits for the financial system, enhancing efficiency and effectiveness for industrial growth. However, challenges in ensuring equitable usage across all regions of Indonesia remain significant across various sectors.

Keywords: digital payment system; Global South actor; MSMEs; digital competitiveness of Indonesia

Introduction

Digital economic growth in Indonesia continues to increase, along with the digital payment system (DPS), which is also increasingly used for daily needs. According to DataBox, the growth of the DPS experienced a rapid increase of approximately 158% from April 2018 to April 2023 (Ahdiat, 2023). Although the development of the digital economy and DPS in Indonesia continues to increase hand in hand, these two things take work to analyze and observe. In this study,

it is essential to consider the influence exerted on Micro, Small, and Medium Enterprises (MSMEs) in implementing the digital economy in Indonesia. The Indonesian government has been vigorously promoting the digitalization of payment systems since promoting its ambition to be at the forefront of the digital economy in Southeast Asia. However, the adoption of DPS by MSMEs faces a significant obstacle due to a lack of knowledge and resources. In addition, consumer habits that have become fixated on conven-

tional DPS also complicate the transition for MSMEs, which requires rapid adoption efforts to reduce potential economic disparities that may occur. This is also supported by Najib and Fahma (2020), who state that consumers feel the efficiency, effectiveness, benefits, and confidence in using DPS.

According to research conducted by Najib and Fahma (2020), MSMEs are essential pillars of the economy, both locally and nationally. Their role can create jobs, reduce poverty, and encourage growth in various regions. It can be noted that more than 75% of domestic products in many countries are driven by MSMEs (Najib & Fahma, 2020). However, currently, MSMEs face significant challenges, especially increasingly fierce competition that can hamper their economic impact. This is especially true in developing countries such as Indonesia, where MSMEs often need help to keep up with technological developments amid the onslaught of competitive MSMEs. Of Indonesia's approximately 63 million MSMEs, many have shown a slow response in adopting new technologies such as DPS compared to large companies. In addition, although about 60% of MSMEs are located in Java, the utilization of technology, including DPS, is still relatively low, with only about 30% -40% integrating technology into their business operations.

The use of DPS in QR codes, commonly known as Quick Response Code Indonesian Standard (QRIS), has become a significant phenomenon in Indonesia. DPS has transformed how we make payments, shifting from traditional to digital methods, each with distinct features. The most popular DPS

in Indonesia includes E-Wallets, which store money on mobile devices; Mobile Banking, which allows various transactions via mobile devices; Credit Cards, which are used for payments but not via mobile devices; Internet Banking, which enables payments over the internet similar to Mobile Banking; and Virtual Accounts, which are more convenient as they do not require registering the recipient's account number (Wahyudi, 2023). The adoption of QRIS by MSMEs significantly impacted financial performance, including increased number and value of transactions, growth in sales turnover, improved business cash flow, and more efficient sales recording. Factors that affect the increase in the use of QRIS are changes in consumer spending behaviour that increasingly tend towards digital, significant growth in internet users to reach 76.70% in 2022, and the impact of the COVID-19 pandemic that accelerated the adoption of digital technology in various sectors, including business transactions. The success of QRIS as a payment technology innovation is also the result of cooperation between Bank Indonesia and the Indonesian Payment System Association (ASPI) to improve transaction efficiency in Indonesia. Based on Bank Indonesia, the use of QRIS at the end of the year reached 14.78 million users. By the end of 2022, it reached 23.9 million users, including MSMEs, and by the end of 2023, it reached 26.6 million MSMEs using QRIS, whereas Bank Indonesia targets 45 million MSMEs in 2023 (Marissa Herlina, 2023). Although the growth of QRIS usage is increasing, there are still some challenges faced by MSMEs, primarily related to lim-

ited information, socialization, literacy, and networking, as well as financial constraints that may reduce their interest in adopting QRIS (Wardhani et al., 2023). MSMEs will slowly lose the broader market effectiveness and efficiency in the transparency of fast and automatic recording of buying and selling operations if MSMEs do not take advantage of and follow the development of technology that continues to develop (Marizsa Herlina, 2023).

The significant growth of DPS in Indonesia has become one of the crucial factors affecting the MSME sector, as well as directly providing a boost to the competitiveness of Indonesia's digital economy, especially in the context of the banking sector, then known as the fintech sector. Regulatory bodies, especially Bank Indonesia, are vital in creating a conducive environment for digital financial services. The aim is not only to encourage economic growth but also to improve operational efficiency and expand the scope of banking services to previously underserved population segments. Banking institutions also show significant resilience and flexibility in responding to the digital era's changing economic dynamics and consumer needs. The emergence of online banking services, mobile banking, and digital payment systems is becoming increasingly common, fundamentally changing traditional banking operations and customer interactions. The modern banking era influenced by digital technology provides greater convenience, accessibility, and efficiency in conducting financial transactions, thus positively impacting Indonesia's digital economy ecosystem

(Hermiyetti, 2024).

Drastic changes in Indonesia's banking sector have become a major focus in efforts to improve accessibility to financial services and contribute to economic empowerment and social development in Indonesia. QRIS service providers must comply with QRIS standards set by Bank Indonesia, whether they are banks or non-bank entities. If they fail to comply, they will not be allowed to operate in Indonesia, and their users will not be able to conduct transactions (PRIMA, 2020). In this context, the role of technological growth has undeniable significance. Currently, the banking sector in Indonesia is ready to adopt digital technology as the main driver of growth and competitiveness for the country's banking sector. With the massive adoption of digital technology, it is hoped that banks can improve their customer services and further contribute to the country's competitiveness. In addition, the main impetus for the Indonesian banking sector to adopt digital technology is also driven by changes in the behaviour and expectations of consumers, who want smoother access and personalized experiences in banking transactions. Under this pressure, banks in Indonesia are constantly striving to innovate, deliver more personalized experiences, and offer multi-channel services to meet the demands of increasingly diverse and growing customers (Hermiyetti, 2024).

In 2022, digital transactions in Indonesia reached an impressive amount of USD 51.9 billion, placing Indonesia as Southeast Asia's most prominent and most developed economic leader. The impact of this growth

is the emergence of various fintech companies in Indonesia, including those that provide DPS services. The main actors are startup companies such as OVO, GoPay, and DANA, which dominate the market. However, not only startup companies but many state-owned banks now provide DPS services. Bank Indonesia and the Financial Services Authority (OJK) regulate the fintech industry in Indonesia, with their respective roles clearly defined. Bank Indonesia is responsible for monetary policy and payment ecosystem regulation. At the same time, OJK focuses on peer-to-peer lending supervision, crowdfunding, digital banking, financial data security, insurance technology, and Financial Consumer Protection. Both institutions have technology divisions that play an essential role in interacting with fintech industry players through long-term strategies, aiming to encourage the advancement of the financial technology sector in Indonesia (International Trade Administration, 2024).

This study focuses on evaluating Indonesia's competitiveness, especially in the context of the role of the banking sector within the fintech sector, often referred to as the fintech sector. The strong relationship between the fintech sector and MSMEs is the main focus of this study, considering that MSMEs frequently use fintech services to support their business processes. Although there has been some literature addressing this topic, such as research conducted by (Aspan et al., 2022) and (Fitri Kumala Sari et al., 2022), the two literature have not explicitly focused on the growth of DPS in Indonesia, which has a significant impact on the devel-

opment of the banking sector in Indonesia. This is mainly because almost all actors in the banking sector now provide DPS services, which ultimately helps encourage the provision of other services to meet users' needs, including MSMEs in the current digital era. So, this study aims to analyze the correlation between the growth of DPS for MSMEs and the unequal distribution of DPS benefits across different regions in Indonesia. This issue is urgent because the lack of widespread adoption and utilization of DPS hinders the potential for economic growth and inclusivity competitiveness in Indonesia, considering the various actors involved, the technological innovation model used, and the relationship between factors and the surrounding functional environment. This consists of analyzing the interactions between different stakeholders, the technological innovation models used, and the relationship between these factors and the surrounding functional environment. By understanding these dynamics, we can identify barriers to DPS adoption and develop strategies to overcome them, ensuring that the advantages of digital payment systems are accessible to all, enhancing Indonesia's overall competitiveness.

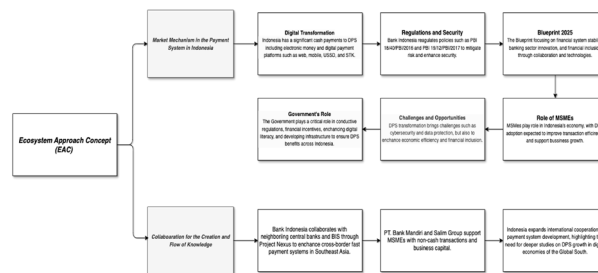
This research marks an essential pillar given Indonesia's role as a leader in the Southeast Asian region in the realm of the digital economy, which is expected to attract increased attention from international actors. In this context, the utilization of DPS growth by competent companies is considered a crucial step to maintain the competitiveness of Indonesia's digital economy at the global level, especially in the fintech sector. Although

initially only providing DPS services, these fintech companies are developing into other digital service providers. However, not only to compete in the international market, it is also essential to utilize DPS to support the sustainability of MSMEs, which are critical actors in the growth of Indonesia's digital economy. The ecosystem approach in this study has an important value in providing a comprehensive analysis of the observed phenomena.

Methodology and Material

In the context of this study, the method chosen is a qualitative approach that combines literature and information sources from the website and applies the analysis using the Ecosystem Approach Concept (EAC). This study aims to deepen the understanding of DPS growth in Indonesia, assess its impact on MSME business performance, and evaluate the competitiveness of Indonesia's digital economy. The EAC was chosen because it allows for a holistic examination of the interconnected elements within the fintech ecosystem, such as regulatory frameworks, technological advancements, and market dynamics. This approach enables researchers to collect specific and detailed data while still obtaining a comprehensive picture that might not be achievable with a more limited quantitative approach. Thus, the chosen methods are relevant and can produce meaningful insights for future research.

Research Findings



1. Ecosystem Approach Concept

Ecosystem Approach Concept (EAC) presents a point of view that examines innovative systems at various levels, ranging from national, regional, and cluster to other social organizational units. Within this framework, the EAC emphasizes several economic principles, the first of which is a market mechanism that develops independently within the ecosystem. Second, emphasis is placed on the nature and dynamics of interactions among potential participants, with collaboration as a driver of knowledge dissemination, transformation of that knowledge flow into innovation, and dissemination of that innovation across the economy. The EAC argues that decisions taken at the universal, regional, and national levels jointly affect the entire ecosystem. The importance of collaboration is highlighted to bring together communities interested in the development of the digital industry, fostering public-private partnerships, creating a competitive environment to accelerate the growth of digital services, and improving their quality (Rozentsvaig & Kovalenko, 2018). Thus, the emergence of the Digital Payment System (DPS) in Indonesia's digital economy is a new impetus for transforming the country's society.

The EAC began through the evolution of the digital economy from a digital transformation process that took more than 30 years. The OECD, an international organization that plays an important role in developing standards for protecting information and regulating data flow across borders, has been active since 1982. In this context, EAC emerges as a crucial solution, similar to software, that looks at the system holistically as an ecosystem and prioritizes sustainable development considerations quality (Rozentsvaig & Kovalenko, 2018). This narrative confirms the importance of the EAC in analyzing the phenomenon of DPS growth in Indonesia, which impacts MSME businesses and the competitiveness of the digital economy.

The EAC essentially adopts the concept of Ecology, which shows the natural evolution of the interaction between economic agents, models of innovative activity, and relations of the national, regional, cluster level, and so on as a subject of a constantly changing social organism under the influence of new dynamics of participants and new situations. This approach suggests that the EAC looks at not only the combination of organizations and institutions but also the multidimensional aspects of internal connections that include economic agents, interactions, and innovative environments consisting of ideas, technologies, regulations, social interactions, and cultural elements, quality (Rozentsvaig & Kovalenko, 2018). Further, in the context of this study, EAC is considered a practical framework for managing the complexity of digital components, including

DPS. This requires flexible management to anticipate and adapt to changes and events that may occur, taking into account the regulations provided by the government of Indonesia.

The EAC brings arguments that combine legal and economic principles in the context of ecosystems. First, the EAC affirms that ecosystems have internal market mechanisms capable of developing independently without governments' excessive intervention, which helps maintain the continuity of innovation processes and avoid too dominant interference from the authorities. Second, the EAC highlights the ecosystem approach's focus on collaboration between system participants, which it believes can facilitate knowledge exchange and innovative transformations that contribute to economic growth. In addition, the EAC also formulated the concept of Innovative Ecosystem (IES) as an evolution of the approach, which emphasizes the importance of conditions that support the improvement of national competitiveness through international regulation from a legal and economic perspective. In the context of research, the role of EAC is crucial to analyzing the influence of DPS growth on MSMEs and Indonesia's competitiveness. At the same time, IES emphasizes the international dimension of the competitiveness of countries that have their regulations applied to their country's economy according to the quality of their condition (Rozentsvaig & Kovalenko, 2018). The research follows a positivist approach using various secondary empirical data, utilizing data from online sources to provide and ex-

plain the correlation between phenomena. This study aims to uncover new findings by adopting the EAC for analysis and empirical data.

Consequently, this research maintains flexibility in its analysis and offers new insights. To ensure clarity, the data analysis process involves detailed coding and theme identification to capture the intricate relationships between actors and phenomena. Furthermore, methods such as triangulation and peer debriefing are employed to validate the findings and ensure reliability. This comprehensive approach enhances the study's credibility, providing a robust framework for understanding the impact of DPS growth on MSMEs and overall competitiveness in Indonesia.

A. Market Mechanisms in The Payment System in Indonesia

This section refers to the concept that ecosystems have internal market mechanisms that manage themselves, creating the necessary conditions for the continuity of technological innovation and avoiding excessive interference from the state of an excessive nature. The relevance of this concept to the development of the payment system in Indonesia over time affects the business strategy of economic actors, including MSMEs, in designing their business processes (Bank Indonesia, 2020; OCBC, 2023). The payment system in Indonesia has undergone a rapid transformation from a cash payment system to a non-cash payment system, also known as DPS. Over the past decade, there has been a massive wave of digital transformation

that has significantly changed consumer behaviour substantially. In addition, the diversity of payment systems is increasing with the introduction of chip-based and server-based electronic money, as well as consumer demand for easier, faster, and safer payments through various platforms, including web, mobile, Unstructured Supplementary Service Data (USSD), and Sim Toolkit (STK). Furthermore, the emergence of virtual currencies or digital currencies that are formed and created by non-monetary authorities poses security risks such as the absence of a clear administrator, financial stability that is vulnerable to financial swelling, a means of money laundering, and even terrorism financing affect Bank Indonesia's policy in regulating financial markets. From the existing risks, Bank Indonesia regulations, such as PBI 18/40/PBI/2016 on the implementation of Payment Transaction Processing and PBI 19/12/PBI / 2017 on the implementation of financial technology, are important in regulating the use of virtual currencies and minimizing risks associated with payment systems (Bank Indonesia, 2020).

Significant digital transformation has transformed the payment system landscape in Indonesia, prompting the government to formulate the Indonesia payment system blueprint 2025 as a guide to navigating this digital era. The transformation brings several opportunities and threats that need to be carefully addressed. On the one hand, more sophisticated payment systems promise convenience, speed, and efficiency that can drive economic growth. However, these developments also pose risks, such as cybersecurity,

compliance with anti-money laundering and anti-terrorism Regulations, and personal data protection. In addition, these changes could result in market dominance by some entities and potential misuse of data that could destabilize the financial system. Other threats include a decline in the role of conventional financial institutions and the growth of shadow banking, which may reduce the effectiveness of monetary policy. With this blueprint, appropriate directions can be given to effectively manage this digital transformation while ensuring Bank Indonesia's role in maintaining the stability and integrity of the financial system (Bank Indonesia, 2020).

The Blueprint outlines five critical visions that become focal points in strategic planning. The First vision focuses on integrating the digital economy and National Finance, which aims to ensure that central banks can regulate money circulation and monetary policy and maintain financial system stability while supporting financial inclusion. Second, the vision seeks to support digital transformation within the banking sector as an intermediary between the digital economy and the financial sector by leveraging technology and data to drive growth and innovation. Third, the blueprint affirms the importance of maintaining a healthy relationship between fintech and the banking sector to avoid shadow banking risks through collaboration and technologies such as Application Programming Interfaces (APIs). Fourth, the blueprint highlights the importance of maintaining a balance between innovative consumer protection and financial system stability by implementing strict regu-

lations such as Know Your Customer (KYC) and Anti-Money Laundering or Combating the Financing of Terrorism (AML/CFT), as well as utilizing technology for surveillance and reporting. Fifth, the blueprint aims to ensure national interests in the digital economy and Interstate finance through regulations that encourage domestic transaction processing within the country and fair cooperation between foreign and domestic operators (Bank Indonesia, 2020).

The Blueprint details five essential steps that will be taken to realize the visions that have been set. First, through open API standardization, this step will secure access to the financial information of banks and fintechs to third parties, facilitating interconnection between banks and fintechs to enhance innovation. Second, the focus is on developing a more efficient and secure retail payment system by introducing 24/7 real-time payments through fast payment, optimizing the National Payment Gateway (GPN), and developing a unified payment interface. Third, financial market infrastructure and wholesale payments, such as Real Time Gross Settlement (RTGS), will be developed. Fourth, steps will be taken to develop and utilize national data collaboratively and integratively to support better decision-making. Finally, there will be regulation, supervision, licensing, and reporting to ensure a conducive environment for the growth of the digital economy and an inclusive and secure financial sector (Bank Indonesia, 2020).

The development and regulation of the payment system in Indonesia is a very relevant and detailed topic, especially

considering its crucial role in Indonesia's e-commerce, transportation, online media, and online travel industries. In these four frameworks, MSMEs play a significant role. The projected value of these industries, which are expected to reach \$82.56 billion by 2023 with continued growth of 12.26% through 2027, highlights the importance of the digital payments ecosystem. The various services provided by DPS have responded to the diverse needs of the Indonesian people. The concept of digital wallets, divided into three categories: closed-digital wallets, open-digital wallets, and prepaid cards, offers significant flexibility and convenience. Closed-digital wallets are intended for specific applications. Merchants such as GoPay, ShopeePay, LinkAja, DANA, OVO, and Prepaid cards can use open-digital wallets, which offer alternative payment solutions. All these aspects are governed by Bank Indonesia Regulation Number 20/6/PBI/2018 on electronic money, which affirms the importance of compliance and eligibility for each service provider. In addition, Payment Gateway, which facilitates online payments, and QRIS, which offers fast and efficient payment methods, help enrich the digital payment ecosystem by implementing ride-hailing, e-learning, and other services. Third, there is the QRIS innovation, where users can make payments through mobile banking or applications without taking more time and distance (Brankas, 2024); with the existence of various kinds of DPS services, various significant implications arise, including changes in cross-border transactions, credit allocation, and a more efficient and universal

financial system. They have increased financial data privacy, monetary policy direction, and the impact on MSMEs as a critical stakeholder in adopting the digital economy ecosystem (Topan Yuniarto, 2024).

The role played by MSMEs in driving the Indonesian economy has been the subject of significant attention. In this context, MSMEs are the largest absorber of Labor, reaching 97% of the total workforce in the business world, and also contribute substantially to the country's Gross Domestic Product (GDP), reaching 61.1%. In comparison, large business actors only contribute around 38.9%. An interesting phenomenon observed in 2022 is the number of cellular connections in Indonesia that exceeds its population of 277.7 million, reaching 370.1 million connections, with a percentage ratio of 133.3% of users. This factor shows excellent potential for the growth of digital payment systems (DPS), with each individual having more than one SIM card and performing digital transactions many times. In developed countries, cash payments are still less common, such as South Korea, which only has 14% of payments in cash, and the United States only 32%; even some European countries have switched completely to non-cash payments (Pratama, 2024). DPS in Indonesia has bright prospects to improve transaction efficiency and support the growth of MSMEs and the country's GDP.

As researched by M. Mashabi and Wasiaturrahma (2021), DPS positively impacts economic growth, particularly in Indonesia (Mashabi & Wasiaturrahma, 2021). In addition to improving transaction securi-

ty, such as reducing theft, DPS also expands MSME access to the ecosystem, combines connections with new markets with employees and suppliers, and opens up wider economic opportunities that are proven to have implemented financial inclusion in the United States (Pratama, 2024). In this framework, the role of the government is essential to ensure that the benefits of DPS are distributed effectively to MSMEs and positively impact the country's economic growth. Four main aspects must be considered in the government's role in distributing DPS benefits to MSMEs:

1. Creating a conducive regulatory environment through the creation of transparent regulations and guidelines to encourage the adoption of digital payments among MSMEs by strengthening aspects of security, data protection, and consumer rights in digital transactions.
2. Provide financial incentives, such as tax exemptions or subsidies, to encourage MSMEs to adopt digital payments, which can help reduce cost barriers for small businesses.
3. Improve digital literacy by socializing and spreading education-related campaigns to MSMEs about the benefits of digital payments and how to use them effectively.
4. Encourage infrastructure development by investing in building digital payment infrastructure with internet connectivity and payment processing systems so that financial facilities for

MSMEs become smoother. The government's role is very central in the distribution of DPS in Indonesia so that financial inclusion occurs and the country's GDP increases (Pratama, 2024).

The adoption rate of DPS by MSMEs still shows that it has yet to reach the optimal level. One of the main determining factors is that many MSMEs still have not fully switched to digital business models, such as participating in e-commerce platforms, and the number of MSMEs utilizing DPS is not yet optimal (Herlina, 2023). As MSMEs step towards digital transformation, DPS will become a crucial and interrelated element. E-commerce and DPS have great potential in facilitating transaction processes, increasing revenue, increasing transparency, and improving the efficiency of MSME business operations. Although the awareness of MSMEs about the importance of digital technology adoption has increased, the distribution and utilization of DPS is still uneven. This may be affected by the need for internet access, especially in rural areas. In this regard, the role of the Indonesian government is crucial in addressing this issue to ensure that the benefits of DPS can be enjoyed evenly throughout the region, not just in big cities (Fathan, 2023).

In the context of this study, the main focus lies on market mechanisms involving Bank Indonesia, DPS, FinTech, and MSMEs in Indonesia. These three variables are interrelated and influence each other, making it an essential subject for research. The role of Bank Indonesia in encouraging the develop-

ment of DPS by fintech, whether non-bank or private sector, as well as banks, confirms the role of regulators in regulating digital financial markets. DPS is fueling innovation in digital services, primarily through mobile devices, which were initially only used for online transactions. This initiative has strengthened Indonesia's competitiveness in the fintech market, with an increasing number of digital service providers yearly. This is reflected in the ever-increasing transaction growth in Indonesia with the emergence of many new actors in the industry. The financial sector has become evident with the penetration of technology and the emergence of digital payment services dominated by financial institutions such as banks, both private and government-owned. However, a paradigm shift occurred with the influx of non-bank players offering digital payment services. This is encouraging traditional banks to adjust their business strategies in the face of this increasingly digital market.

Nonetheless, this dynamic has a positive impact by encouraging technological innovation and reducing excessive government interference in the sector. However, it should be recognized that the distribution of digital payment services, especially to MSMEs, is not entirely the government's responsibility alone. Fintech industry players also have a significant role in promoting, maintaining security, and ensuring that MSMEs can make optimal use of it, just as Grab through OVO continues to push for the adoption of DPS among MSMEs (Antara, 2021). The challenge arises when the internet infrastructure in some regions is still inadequate, thus

hindering the adoption of digital payment services. The government has become very important in ensuring equal internet access across the country or providing incentives to industry players to invest in areas still lagging in internet connectivity.

B. Collaboration for the creation and flow of knowledge

This section discusses a collaborative approach to improving cross-border payment systems in the Southeast Asian region, focusing on developing fast payment-based DPS by building partnerships that disseminate knowledge and transform flows that can shape innovation across all aspects of the economy. Bank Indonesia is working with central banks from neighbouring countries, including Bank Negara Malaysia (BNM), Bangko Sentral ng Pilipinas (BSP), Monetary Authority of Singapore (MAS), and Bank of Thailand (BOT), to explore the potential of fast payment-based DPS, particularly in Southeast Asia, and to engage the Bank for International Settlements (BIS) through Project Nexus. This cooperation continues the Memorandum of Understanding (MoU) on regional payment connectivity approved by the five banks on November 14, 2022. The project known as Project Nexus is divided into three stages. The first phase aims to establish a multilateral scheme to connect fast payment systems in different countries. The second phase focuses on cross-border fast payment research and trials, while the third phase explores organizational, business model, technology and operational aspects implemented from April 2023 to March

2024. The goal of the project is to build a retail payment infrastructure that can be accessed at any time, with the hope of increasing ease, security, and inclusion in cross-border transactions, which will benefit various stakeholders, including MSMEs, tourists, and Indonesian migrant workers (Haryono, 2023).

Companies such as PT. Bank Mandiri and Salim Group and Bank Syariah Indonesia (BSI) have taken several initiatives to support MSMEs—cooperation between PT. Bank Mandiri and Salim Group cover a wide range of services, such as the provision of wholesale goods and the sale of digital products, with a focus on accepting non-cash payments, recording digital transactions, and providing business development capital for MSMEs. In addition, BSI also launched the MSME Center program in collaboration with Bank Indonesia to improve the quality and competitiveness of MSME products in the Go Halal Go Digital and Go Global MSME schemes. This Program assists MSMEs in adopting digital technology for product marketing, facilitating financial transactions through DPS, improving market access, and providing training related to business processes. The initiative also expands opportunities for BSI to penetrate international markets, especially in the Middle East through partnerships with conglomerates and startups in Dubai, United Arab Emirates (Hayana, 2023).

The cooperation implemented by Indonesia in developing the payment system is not limited to the national level but also includes the international level, which

allows more comprehensive market access and increases the country's competitiveness. Although the cooperation benefits not only fintech actors but also MSMEs, international regulations governing competition between countries in the payment system still do not exist, encouraging countries to develop their own regulations and cooperate with other countries and non-state parties. Although Indonesia has been active in such cooperation, it is essential to consider how countries in the rest of the Global South Region are developing their payment systems. So, according to the author, future studies that focus on the growth of DPS in countries with digital economies that have not developed significantly become a need that needs to be considered more deeply (Hayana, 2023).

Conclusions and research results

In the context of the digital age, DPS has emerged as an essential component in the financial system, providing efficiency and effectiveness in the flow of funds, especially with the growth of industries that increasingly rely on digital transactions. Although DPS offers significant potential benefits for MSMEs and other business people, its deployment and utilization have yet to be evenly distributed across sectors. In this study, the Asian Economic Committee (EAC) highlighted several challenges and recommendations to improve the distribution and utilization of DPS, namely:

1. DPS distribution and other digital services to reach all MSMEs in Indonesia by prioritizing safety and comfort for users.
2. Promoting and supervising technolo-

gy, including DPS by the private sector and the Indonesian government, is also emphasized to ensure balanced adoption of technology throughout the region.

3. The creation of organizations and communities that accommodate all stakeholders in the Indonesian payment system is also a focus, with the goal of supporting broader and effective cooperation and encouraging innovation in this sector.

The international regulations governing DPS are seen as important to creating a healthy and equitable environment for all countries. This emphasizes the need for a comprehensive review because, until now, most regulations have focused more on the national level and have not been able to embrace all countries equally.

References

Journal Article (retrieved online, with DOI)

- Aspan, H., Nasution, A. P., & Malikah, I. (2022). Digital Banking in Indonesia: The Development of Cashless Culture and Regulations. *International Journal of Research and Review*, 9(1), 534–543. <https://doi.org/10.52403/ijrr.20220162>
- Mashabi, M., & Wasiaturrahma, W. (2021). ELECTRONIC BASED PAYMENT SYSTEMS AND ECONOMIC GROWTH IN INDONESIA. *Jurnal Ilmu Ekonomi Terapan*, 6(1), 97. <https://doi.org/10.20473/jiet.v6i1.26287>
- Sari, F. K., Fadly, Y. & Ramadhan, P. R. (2022). The Effect of Changes in the Value of Conventional Interbank

Transfers and Digital Banks in Technological Development. *Britain International of Humanities and Social Sciences (BIOHS) Journal*, 4(2), 246–257. <https://doi.org/10.33258/biohs.v4i2.653>

- Wardhani, R. A., Arkeman, Y., & Ermawati, W. J. (2023). The Impact of Quick Response Adoption of Payment Code on MSMEs' Financial Performance in Indonesia. *International Journal of Social Service and Research*, 3(3), 869–878. <https://doi.org/10.46799/ijssr.v3i3.294>

Journal Article (retrieved online, without DOI or page numbers)

- Hermiyetti. (2024). TOWARDS THE FUTURE: DIGITAL TRANSFORMATION IN INDONESIAN BANKING AND ITS IMPLICATIONS FOR ECONOMIC GROWTH AND PUBLIC PROSPERITY. *International Journal of Economic Literature (INJOLE)*, 2(2), 505–520. Retrieved from: <https://injole.joln.org/index.php/ijle/article/view/85>

Electronic source

- Ahdiat, A. (2023). *nilai-transaksi-digital-banking-di-indonesia-per-bulan-(januari-2018-april-2023)*. Retrieved from <https://databoks.katadata.co.id/datapublish/2023/07/05/transaksi-digital-banking-di-indonesia-tumbuh-158-dalam-5-tahun-terakhir>
- Antara. (2021, December 23). *OVO jadi alat pembayaran utama pilihan UMKM di Indonesia*. Antara. Retrieved from <https://www.antaraneews.com/berita/2602205/ovo-jadi-alat-pembayaran-utama-pilihan-umkm-di-indonesia>
- Bank Indonesia. (2020). *Sistem Pembayaran & Pengelolaan Uang Rupiah*. Sistem Pembayaran & Pengelolaan Uang Rupiah. Retrieved from <https://www.bi.go>

- id/id/fungsi-utama/sistem-pembayaran/default.aspx
- Brankas. (2024, February 29). *Perkembangan Pembayaran Digital di Indonesia: Tren dan Peluang*. Perkembangan Pembayaran Digital Di Indonesia: Tren Dan Peluang. Retrieved from <https://blog.brankas.com/id/perkembangan-pembayaran-digital-di-indonesia-tren-peluang>
- Erwin, H. (2023, April 11). INDONESIA DAN BEBERAPA NEGARA ASEAN EKSPLORASI KERJA SAMA SISTEM PEMBAYARAN LINTAS BATAS BERBASIS FAST PAYMENT. *INDONESIA DAN BEBERAPA NEGARA ASEAN EKSPLORASI KERJA SAMA SISTEM PEMBAYARAN LINTAS BATAS BERBASIS FAST PAYMENT*. Retrieved from https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_259223.aspx
- Fathan, M. A. (2023, April 30). *Cara Meningkatkan Penggunaan Digital Payment di Masyarakat Berdasarkan Hasil Penelitian*. Cara Meningkatkan Penggunaan Digital Payment Di Masyarakat Berdasarkan Hasil Penelitian. Retrieved from <https://ukmindonesia.id/baca-deskripsi-posts/cara-meningkatkan-penggunaan-digital-payment-di-masyarakat-berdasarkan-hasil-penelitian>
- Hayana. (2023, February 20). *BSI UMKM Center: UMKM Go Halal Go Digital Go Global*. BSI UMKM Center : UMKM Go Halal Go Digital Go Global. Retrieved from <https://www.iainpare.ac.id/en/blog/opinion-5/bsi-umkm-center-umkm-go-halal-go-digital-go-global-1667>
- Herlina, M. (2023, August 9). *OPINI: QRIS Identitas Digital Para UMKM*. Finansial. Retrieved from <https://finansial.bisnis.com/read/20230809/90/1683040/opi-ni-qr-is-identitas-digital-para-umkm>
- International Trade Administration. (2024). *Indonesia - Country Commercial Guide*. Retrieved from <https://www.trade.gov/country-commercial-guides/indonesia-financial-services-financial-technology>
- OCBC. (2023, February 13). *Mekanisme Pasar: Pengertian, Cara Kerja & Contohnya*. Mekanisme Pasar: Pengertian, Cara Kerja & Contohnya. Retrieved from <https://www.ocbc.id/id/article/2023/02/13/mekanisme-pasar-adalah>
- Pratama. G. (2024, March 25). *Meningkatkan Kontribusi UMKM terhadap PDB Melalui Transformasi Digital*. Meningkatkan Kontribusi UMKM Terhadap PDB Melalui Transformasi Digital. Retrieved from <https://infobanknews.com/meningkatkan-kontribusi-umkm-terhadap-pdb-melalui-transformasi-digital/>
- PRIMA. (2020). *Satu QRIS untuk Seluruh Pembayaran*. Retrieved from <https://www.jaringanprima.co.id/id/satu-qr-is-untuk-seluruh-pembayaran-qr-code-indonesia>
- Rozentsvaig, A. I., & Kovalenko, K. E. (2018). ECOSYSTEM APPROACH TO THE LEGAL REGULATION OF DIGITAL ECONOMY. In *Special Issue N°2*. Retrieved from <https://dialnet.unirioja.es/servlet/articulo?codigo=6562904>
- Wahyudi, M. D. (2023, March 8). *Ini 5 Jenis Digital Payment yang Populer di Indonesia untuk Bisnis*. PAPER. Retrieved from <https://www.paper.id/blog/bisnis/digital-payment-indonesia/>
- Yuniarto, T. (2024, February 7). *Uang Digital: Pengertian, Mekanisme, dan Dampaknya*. Ekonomi Digital: Uang Digital: Pengertian, Mekanisme, Dan Dampaknya. Retrieved from <https://kompaspedia.kompas.id/baca/paparan-topik/uang-digital-pengertian-mekanisme-dan-dampaknya>