Indonesian sharia fintech services and social media usage

Leon A. Abdillah ^{a,1,*}, Yogi I. Mukti ^b, Desi Puspita ^b, Suhartini ^c

- ^a Dept, of Information Systems Universitas Bina Darma, Jl. Ahmad Yani No.3, Palembang 30264, Indonesia
- ^b Sekolah Tinggi Teknologi Pagar Alam, Pagar Alam, Indonesia
- ^c STMIK Prabumulih, Prabumulih, Indonesia
- 1 leon.abdillah@yahoo.com*
- * corresponding author

ARTICLE INFO

ABSTRACT

Article history

Received July 15, 2021 Revised August 2, 2021 Accepted August 30, 2021

Keywords

Digital economy E-commerce Information Technology Islamic fintech Social Media Mobile and information technology have reconfigured the global towards a digital system including the digital economy and its payment technology through mobile applications and social media. COVID-19 pandemic has triggered all parties to accelerate and expand IT-based and digital services. The limited of studies related to Islamic Fintech in Indonesia is the main reason for writing this article. Continuing the previous research, it is known that Indonesia in general has followed the era with many Fintechs and startups growing. However, there are still very few Sharia-based services. After conducting online surveys with a number of agencies such as OJK, Fintech Islami Indonesia, it is known that 10 out of 121 Fintechs operate or serve sharia schemes. They provide financial services for: SMEs and MSMEs (60.00%), General or Consumptive Financing (30.00%), and Property (30.00%), followed by Umrah and Hajj (20.00%), Education (10.00%), and Health (10.00%). Most of the Indonesian sharia fintech (60%) already have mobile-based applications, both Android and iOS. The most widely used social media are Instagram and Facebook, in addition to Twitter, LinkedIn, WhatsApp, and YouTube. In the future, it is hoped that more Indonesian Islamic Fintechs include those serving other sectors such as Agriculture, Forestry, Maritime Affairs and Fisheries, linked to crypto-currency, etc.

This is an open access article under the CC-BY-SA license.



1. Introduction

The development of the digital world based on information technology has changed many aspects of human life. Several shifts in the business world towards the digital economy involve a lot of online or virtual activities. Internet consumption during digital activities are shown by Global Internet Protocol (IP) traffic, which serves as a proxy for data transfers, increased from approximately 100 gigabytes (GB) per day in 1992 to more than 45,000 GB per second in 2017. (Fig. 1). And yet, the data-driven economy is still in its infancy; by 2022, global IP traffic is expected to surpass 150,700 GB per second [1], fuelled by more and more people coming online for the first time and by the expansion of the Big Data, Cloud Computing, IoT, Smartphones, and Social Media [2].

The world of trade has also undergone significant changes. With digital economy, the ecommerce trend is experiencing very rapid progress. With its rapid speed, limitless storage capacity, and numerous conveniences, information technology has become a prominent trend in virtually every part of life. Numerous terminologies relating to information technology have been widely used. The phrase e-Government is well-known in the sphere of government. In the realm of education, terminology such as e-learning, blended learning, and distance learning are frequently used. Additionally, the business and trade sectors are riddled with recent developments such as e-commerce, online shopping, and marketplaces. In the financial sector, the term Financial Technology is now fashionable (Fintech). Indonesia as a country that is experiencing a transition





from a developing country to a developed country is not left behind in implementing the use of Fintech [3]–[5]. Until 2020, there are at least 6 (six) startup companies [3], [6] that have entered the unicorn and decacorn level. One example of skills and knowledge currently trending in the business world is the emergence of new StartUps in the field: 1) Transportation [7]: Gojek and Traveloka, 2) MarketPlaces [8], [9]: TokoPedia, BukaLapak, and JD.ID, and 3) Financial Technology (FinTech) [10], such as OVO [4], [11].

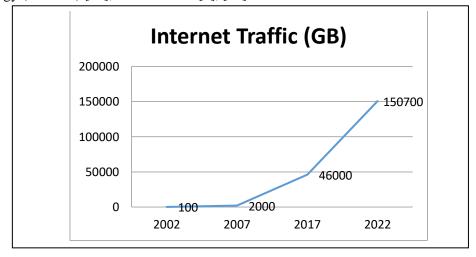


Fig. 1. Internet Traffic Growth between 2002-2022 (in GB).

As world largest Muslim country in the worlds, Indonesia is one of the biggest online markets for internet-based business. Until July 2020, more than 185 million internet users or equal to over 68 percent [12]. This figure is predicted to continue to increase, and by 2020 it is estimated that there will be 256.37 million internet users in Indonesia.

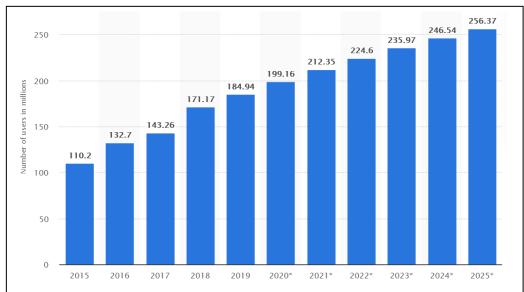


Fig. 2. Indonesia Internet Users 2015-2025 (in million).

Meanwhile, the collaboration of Smartphones and social media has further advanced the global mobile digital world. 2020 is a year that will be remembered as the year of the global pandemic COVID-19 [13]. The pandemic that began to spread from the Chinese city of Wuhan is set to become a pandemic in March 2020 [14]. In a very short time, COVID-19 has infected almost all the inhabitants of the earth in all areas. Universally, per 20 August 2021, there have been 209,876,613 confirmed cases of COVID-19, including 4,400,284, reported to WHO [15]. COVID-19 is indeed very fast spreading without knowing anyone. It can infect children, adults, as well as the elderly. Even most horrendously, COVID-19 also infected Prince Charles Philip Arthur George in Britain (March 25, 2020) and the President of the United States, Donald John Trump (September 30, 2020).

Table 1 presents the regions most affected by COVID-19 including Americas, Europe, South-East Asia, Eastern Mediterranean, Western Pacific, and Africa. Countries with more than ten million cases include United States of America, India, and Brazil (20 August 2021). The global pandemic COVID-19 has forced all parties to adhere to strict health protocols, such as maintaining distance, minimizing crowds, reducing contact activity, maintain health and immunity, etc.

Table.1 Top 12 countries, areas or territories of COVID-19 cases (21 August
--

Rank	Country	Country	Cases
1	USA	America	36,547,639
2	India	Asia	32,250,679
3	Brazil	America	20,364,099
4	Russia	Europe/Asia	6,642,559
5	France	Europe	6,317,130
6	UK	Europe	6,295,617
7	Turkey	Asia/Europe	6,096,816
8	Argentina	America	5,084,635
9	Colombia	America	4,867,761
10	Spain	Europe	4,719,266
11	Iran	Asia	4,467,015
12	Italy	Europe	4,444,338
13	Indonesia	Asia	3,892,479
14	Germany	Europe	3,827,051
15 Mexico		America	3,101,266

The phenomenon of disruptive innovation has also occurred in the financial services industry, which has disrupted the landscape of the financial services industry globally, starting from the structure of the industry, its intermediation technology, to its marketing model to consumers [16]. All these changes led to the emergence of a new phenomenon called Financial Technology (Fintech). The following will describe a number of studies related to Fintech in Indonesia. The role of Fintech in improving financial inclusion in Indonesia MSMEs [17]. Fintech implementation constraints in improving financial inclusion in MSMEs in Indonesia, as follow: 1) Infrastructure, 2) Human Resources (HR), 3) Legislation, and 4) Lack of financial literacy.

The Role of Islamic Financial Technology (Fintech) Start-up in Improving Financial Inclusion in Indonesia case study of Angsur [18]. Islamic Fintech Start-up like "Angsur" becomes an alternative to finance undergraduate students' e-commerce purchases. They concluded that Start-up will act as complement for traditional bank services.

Islamic financial technology development in Indonesia is divided into four categories, namely: 1) Fintech function perspective, 2) Islamic Fintech problems, 3) Islamic Fintech strategy development, and 4) Islamic Fintech's Ecosystems or Actors involved Indonesia. Last but not least, The author himself has also conducted a study related to the overall overview of FintTech in Indonesia [11]. The author will continue his studies with a focus on Islamic Indonesia Fintech and the financial services it offers. Based on those previous studies, there is minimum information related to the landscape of Islamic Indonesia Fintech. This study will cover the overall services of Indonesia Islamic Fintech from several aspects.

This study aims to provide the landscape of Islamic Fintech applications in Indonesia in general. Especially, the types of services provided by Islamic's Fintech applications in Indonesia. Indonesia as a country with the largest Muslim population in the world should pay more attention to the development of digital economies and sharia Fintech.

2. Method

In this methodology section, the author will explain the source of the data, as well as the method of approach used. This research employs a combination of quantitative and qualitative methods. The author used a quantitative approach to compile data from past OJK reports. The data is next evaluated qualitatively.

2.1. Data

Initial data in this study were taken from the dissemination of international conferences in 2019 [11]. Then the data is updated according to data from the latest OJK. As of 27 July 2021 [19], there have been 121 registered and licensed Fintech Lending Operators at the OJK. The data announced is related to the Platform Name, Website, Company Name, Registered Certificate, Date, Type of Business, and Operating System.

2.2. Approaches

The approach used in this research is a hybrid that combines the quantitative and qualitative actions. In quantitative approach, author gathered information from previous report of OJK per 27 July 2021. The data then convert into spreadsheet for further analyze and calculation. The information is then analyzed using a qualitative approach. Author adds some additional resources by browsing the Fintech websites to enrich the analysis and discussion.

2.3. Research Objects

Fintech is an acronym for Financial Technology, which refers to the adoption of information technology advancements in the financial services business. All financial activities were digitalized during the Fintech era using internet-based transaction modalities and are now accessible via smart devices such as smartphones.

On 11 October 2018, the IMF and World Bank launched the Bali Fintech Agenda [20], [21], a set of 12 policy elements aimed at helping member countries to capitalize on the benefits and opportunities of rapid advances in financial technology that transform the provision of banking services, while at the same time managing inherent risks. "The Bali Fintech Agenda" consists of 12 points.

Fintech is rising at a quick pace, as are StartUps or information technology-based enterprises that can trade directly with customers or suppliers without using traditional banking institutions. Fintech development in Indonesia is still in its infancy [22]. In Southeast Asia itself, Indonesia is one of the countries whose Fintech market is growing rapidly.

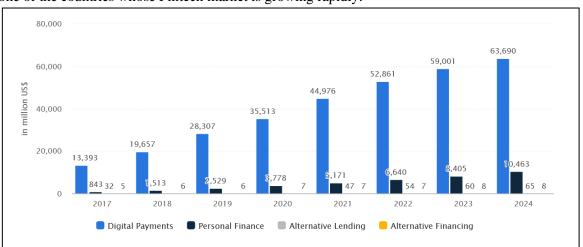


Fig. 3. Growth in Indonesia's FinTech Transaction Value (in million US\$).

There are five types of Fintech transactions that are developing in Indonesia [23], namely: 1) Payment, Settlement, and Clearing, 2) Market Aggregator, 3) Risk and Investment Management, 4) Crowd-funding and Peer to Peer (P2P) Lending, and 5) Other financial services. The projected growth in the value of Indonesia's FinTech transactions continues to experience significant

increases. Pada Juni 2020 [24] the value of the "Digital Payments" transaction reached US \$ 35.513 million. In 2024, this value is predicted to increase to more than 100% or US \$ 63,690 million.

As of August 14, 2020 there are 157 FinTech operators registered or licensed in Indonesia [25]. In the future, it is predicted that more variants of FinTech-based financial services will emerge. The local fintechs are pushing quickly to pursue profitable opportunities [26].

3. Result and Discussion

3.1. Overall Fintech Types

All Fintech companies registered or licensed in Indonesia as of July 27, 2021 totaled 121. This number decreased by 37 Fintechs from the number of Fintechs as of August 2020, or an decrease of 13.3%. Of these, 111 Fintechs operate in full conventional types of business or equivalent to 91.7%. Fig. 4 presents that there is only one Fintech that operates both conventionally and sharia. While the number of Fintech operating in full sharia is nine or equivalent to 7.4% (7% rounded) and if added with hybrid Fintech, there are 10 total fintechs operating in sharia or equal to 8.20% (8% rounded).

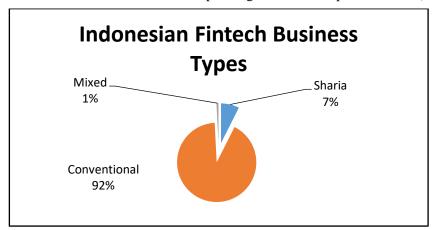


Fig. 4. Indonesian FinTech Business Types (in percentage).

3.2. Indonesia Islamic Fintech

Indonesia Fintech companies that operate Sharia or provide Sharia services only amount to 10 or 8.00 percent. Among the Sharia Fintech, there are six Android-based services, four of which provide iOS-based services, while three don't have mobile-based services or the equivalent of 30.00%. These data indicate that Indonesian sharia Fintech is still not optimally utilizing information technology trends yet.

		0 1 7	
No	Platforms	Company	Operating Systems
1	Investree	PT Investree Radhika Jaya	Android & iOS
2	Ammana.id	PT Ammana Fintek Syariah	Android & iOS
3	ALAMI	PT Alami Fintek Sharia	Android & iOS
4	DANA SYARIAH	PT Dana Syariah Indonesia	Android & iOS
5	Duha Syariah	PT Duha Madani Syariah	Android
6	qazwa.id	PT Qazwa Mitra Hasanah	-
7	ETHIS	PT Ethis Fintek Indonesia	-
8	KAPITALBOOST	PT Kapital Boost Indonesia	-
9	PAPITUPI Syariah	PT Piranti Alphabet Perkasa	Android
10	Finteck Syariah	PT Berkah Finteck Syariah	Android

Table.2 Islamic Lending Company List FinTech Sharia in OJK [19]

3.3. Indonesia Islamic Fintech Services

Indonesia Fintech companies that operate Sharia or provide Sharia services only FinTech Islamic Indonesia has provided services that are quite evenly distributed in a number of fields such as: SMEs and MSMEs, General or Consumptive Financing, Umrah and Hajj, Property, Education and Health which describes in Table 3.

Table.3 Indonesia Islamic Fintech Services

No	Platforms	Services
1	Investree	Small and medium enterprises (SMEs)
2	Ammana.id	Micro, Small and Medium Enterprises (MSMEs)
3	ALAMI	Micro, Small and Medium Enterprises (MSMEs)
4	DANA SYARIAH	Property Project
5	Duha Syariah	Consumptive financing (purchase of goods / services), halal Umrah travel, and productive financing according to Sharia principles.
6	qazwa.id	Small and medium enterprises (SMEs)
7	ETHIS	Property Project
8	KAPITALBOOST	Small and medium enterprises (SMEs)
9	PAPITUPI Syariah	Employees (Company employees, members of employee cooperatives and company employees)
10	Finteck Syariah	Murabaha Financing (general), Renting, Ijarah financing is financing for the payment of tuition fees, hospital fees, Umrah travel expenses in accordance with sharia principles.

Among the 10 (ten) of Indonesian Islamic Fintechs, it is known that they serve financial services for the following purposes:

- SMEs and MSMEs (60.00%).
- General or Consumptive Financing (30.00%)
- Umrah and Hajj (20.00%)
- Property (30.00%)
- Education (10.00%)
- Health (10.00%).

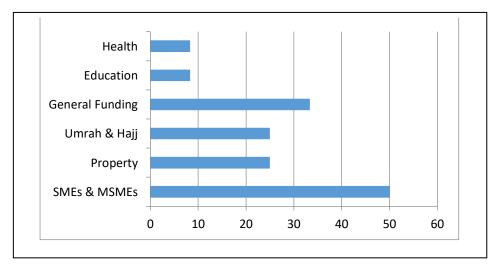


Fig. 5. Indonesia Islamic Fintech Services (in percentage).

3.4. Indonesia Islamic Fintech Social Media

Social Media [27] is the most effective medium in conveying information quickly and can be accessed by all ages anytime and anywhere. No wonder social media is one of the latest information technology trends today. A number of Indonesian sharia fintechs also use social media as digital profiles in cyberspace. Among the ten of Indonesian Islamic Fintechs, it is known that they use social media as follow:

- Facebook (80.00%).
- Instagram (90.00%).
- LinkedIn (50.00%)
- WhatsApp (50.00%)
- Twitter (70.00%).
- YouTube (40.00%).

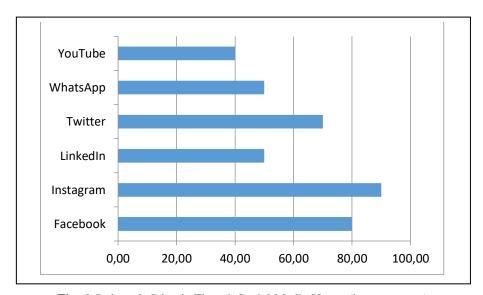


Fig. 6. Indonesia Islamic Fintech Sociel Media Usage (in percentage).

3.5. Discussion

The discussion in this article is based on the results presented or presented in the previous section. There are 4 (four) main discussion related to: 1) Fintech Business Types, 2) Fintech Application Operating Systems, 3) Fintech Services, and 4) Fintech Social Media Usage.

Along with the proliferation of virtual business models in cyberspace, it encourages all related parties (stakeholders) to also implement an electronic payment system. The result from Fig. 4 represents an irony for Indonesia as a country with a Muslim majority. Even in the world, Indonesia is the largest Muslim country. Indonesia only owns 8% of Fintech which operates in a sharia manner.

Business mode has also experienced a drastic shift towards electronic transaction mode, both using the web and via smartphone gadget [4]. Business systems are increasingly using the term ecommerce or m-commerce, which takes place virtually through a number of information technology-based applications. The results of the query presented in Table 2 illustrates that Islamic Fintech Indonesia has not all taken advantage of information technology trends, especially services that use mobile or smartphones, there are still 30,00% of Islamic Fintech Indonesia who have not provided mobile or smartphone-based Fintech services.

For services by sector, Indonesian sharia fintech is still focused on serving the SME and MSME sectors (60.00%), while sectors related to education and health are still very few (10.00% each). The development paradigm has shifted from initially centered on economic growth to development that

is human centered through education [28] and health [29]. The world of education in Indonesia in the last decade has received more attention from the government with a fairly large allocation of funds from the state budget. Meanwhile, health sector spending has also increased sharply since the COVID-19 pandemic hit the world and Indonesia.

The power of social media is still an attraction for many agencies to convey information. The presence of social media [30] turned out to have an impact on changing the way of communicating from conventional to modern and all-digital, but also caused the ongoing communication to be more effective. Social networking media offers many business advantages for companies and organizations [27]. Facebook and Instagram are social media platforms that are widely used by Indonesian sharia fintech. Instagram is used by 90.00% of Indonesian sharia fintech followed by Facebook by 80.00%.

4. Conclusion

The development of Indonesian FinTech in general has been quite encouraging. The existence of sharia Fintech is currently an option for economic actors. The number of Fintech as one of the pillars of the digital economy continues to experience good growth. However, sharia Fintech services still need serious attention from the government and related parties. Likewise, Islamic Fintech services that use smartphones need to be maximally pushed.

Even though the COVID-19 vaccine will be discovered, it seems that the behavior that took place during the new normal period will continue to be a habit for most people. Digital transaction modes will develop rapidly in line with the increasingly massive advances in information technology. Based on the study, author encourages legal Indonesia authority to force the progression of Fintech-based applications in Indonesia. Currently, Indonesian sharia Fntech is dominated by services for SMEs and MSMEs, the Android operating system for mobile-based application services, and utilizing Instagram and Facebook on social media.

In the future, the existence of Fintech-based financial applications can contribute to the lucrative growth and welfare of the economy for Indonesia's digital economy. It is hoped that this type of financing can also enter Indonesian specific sectors such as Agriculture, Fisheries, Forestry, etc. As the largest Muslim population in the world, the Indonesian government should focus more on encouraging the growth and development of Fintech companies that operate in sharia. The government can also benchmark a number of countries with more advanced Islamic Fintech, both in the ASEAN region or on a global scale such as the Organization of Islamic Cooperation (OIC).

References

- [1] United Nations, "Digital Economy Report 2019," *United Nations Conference on Trade and Development (UNCTAD)*, 2019. [Online]. Available: https://unctad.org/en/PublicationsLibrary/der2019_overview_en.pdf.
- [2] J. Valacich and C. Schneider, *Information Systems Today: Managing in the Digital World*, 8th ed. New York, USA: Pearson Education, Inc., 2018.
- [3] L. A. Abdillah, "FinTech E-Commerce Payment Application User Experience Analysis during COVID-19 Pandemic," *Sci. J. Informatics*, vol. 7, no. 2, pp. 265–278, 2020.
- [4] L. A. Abdillah, "Financial Technology (FinTech)," in *Tren Teknologi Masa Depan (Future Technology Trends)*, Medan: Yayasan Kita Menulis, 2020.
- [5] A. Riyanto, I. Primiana, Yunizar, and Y. Azis, "Disruptive Technology: The Phenomenon of FinTech towards Conventional Banking in Indonesia," in *IOP Conference Series: Materials Science and Engineering*, 2018, vol. 407, no. 1.
- [6] A. Ghina and I. Sinaryanti, "The Learning Evaluation of Business Incubator's Role in Developing Technology-Based Startups at Technology Business Incubator," *Asian J. Technol. Manag.*, vol. 14, no. 1, pp. 35–56, 2021.
- [7] V. Briliana, T. Deitiana, and W. Ruswidiono, "How Millennial Travelers Are Forcing Indonesian Tourism To Go Digital," *Int. J. Business, Econ. Law*, vol. 19, no. 2, pp. 1–7, 2019.

- [8] H. T. Sugiharto, S. R. Zein, E. B. Setiawan, and L. Lesmini, "Increasing Purchase Intention through Delivery and Brand Reputation in E-commerce," *Adv. Transp. Logist. Res.*, vol. 2, pp. 51–58, 2019.
- [9] A. S. Nisafani, A. Wibisono, and M. H. T. Revaldo, "Analyzing the Effectiveness of Public e-Marketplaces for Selling Apparel Products in Indonesia," in *Procedia Computer Science*, 2017, vol. 124, pp. 274–279.
- [10] N. Iman, "Traditional banks against fintech startups: A field investigation of a regional bank in Indonesia," *Banks Bank Syst.*, vol. 14, no. 3, pp. 20–33, 2019.
- [11] L. A. Abdillah, "An Overview of Indonesian Fintech Application," *1st Int. Conf. Commun. Inf. Technol. Youth Study*, pp. 8–16, 2019.
- [12] J. Müller, "Number of internet users in Indonesia from 2015 to 2025 (in millions)," 2020. [Online]. Available: https://www.statista.com/statistics/254456/number-of-internet-users-in-indonesia/. [Accessed: 11-Sep-2020].
- [13]D. Zhang, M. Hu, and Q. Ji, "Financial Markets Under the Global Pandemic of COVID-19," *Financ. Res. Lett.*, vol. 36, no. January, 2020.
- [14] WHO, "WHO Director-General's opening remarks at the media briefing on COVID-19 11 March 2020," 2020. [Online]. Available: https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020.
- [15] WHO, "WHO Coronavirus (COVID-19) Dashboard," 2021. [Online]. Available: https://covid19.who.int/.
- [16] M. D. Hadad, "Financial Technology (FinTech) di Indonesia." Otoritas Jasa Keuangan (OJK), Jakarta, 2017.
- [17] F. R. Pambudianti, B. Purwanto, and T. N. A. Maulana, "The implementation of fintech: Efficiency of MSMEs loans distribution and users' financial inclusion index," *J. Keuang. dan Perbank.*, vol. 24, no. 1, pp. 68–82, 2020.
- [18] H. B. Firmansyah and A. L. Ramdani, "The Role of Islamic Financial Technology (FinTech) Start-Up in Improving Financial Inclusion in Indonesia Case: Angsur," in 3The rd International Conference of Integrated Intellectual Community (ICONIC2018), 2018.
- [19]OJK, "Perusahaan Fintech Lending Berizin dan Terdaftar di OJK Per 27 Juli 2021," 2021. [Online]. Available: https://www.ojk.go.id/id/kanal/iknb/financial-technology/Documents/Penyelenggara Fintech Lending Terdaftar dan Berizin di OJK per 27 Juli 2021.pdf.
- [20] The World Bank Group, "The Bali Fintech Agenda: A Blueprint for Successfully Harnessing Fintech's Opportunities," *The World Bank Group, IMF*, 2018. [Online]. Available: https://www.worldbank.org/en/news/press-release/2018/10/11/bali-fintech-agenda-a-blueprint-for-successfully-harnessing-fintechs-opportunities.
- [21] International Monetary Fund, "The Bali Fintech agenda: A blueprint for successfully harnessing Fintech's opportunities," 2018. [Online]. Available: https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/10/11/pp101118-bali-fintech-agenda.
- [22] A. Barata, "Strengthening National Economic Growth and Equitable Income Through Sharia Digital Economy in Indonesia," *J. Islam. Monet. Econ. Financ.*, vol. 5, no. 1, pp. 145–168, 2019.
- [23] Bank Indonesia, "Peraturan Anggota Dewan Gubernur Nomor 19/14/PADG/2017 Tentang Ruang Uji Coba Terbatas (Regulatory Sandbox) Teknologi Finansial." Bank Indonesia, Jakarta, 2017.
- [24] Statista, "FinTech (Indonesia)," 2020. [Online]. Available: https://www.statista.com/outlook/295/120/fintech/indonesia.
- [25] Otoritas Jasa Keuangan, "Penyelenggara Fintech Lending Terdaftar dan Berizin di OJK per 14 Agustus 2020," 2020. [Online]. Available: https://www.ojk.go.id/id/kanal/iknb/financial-technology/Documents/Penyelenggara terdaftar_berizin 14 agustus 2020.pdf. [Accessed: 07-Sep-2020].
- [26] K. Davis, R. Maddock, and M. Foo, "Catching-Up with Indonesia's Fintech Industry," *Law Financ. Mark. Rev.*, vol. 11, no. 1, pp. 1–24, 2017.

- [27] D. R. Rahadi and L. A. Abdillah, "The utilization of social networking as promotion media (Case study: Handicraft business in Palembang)," in *Seminar Nasional Sistem Informasi Indonesia (SESINDO2013)*, 2013.
- [28] E. A. Hanushek and L. Woßmann, "Education and Economic Growth," in *Economics of Education*, D. J. Brewer and P. J. McEwan, Eds. San Diego, USA: Academic Press (Elsevier), 2010.
- [29] R. J. Barro, "Health and Economic Growth," Ann. Econ. Financ., vol. 14, no. 2 A, pp. 305-342, 2013.
- [30] G. Meikle, *Social Media: Communication, Sharing and Visibility*. New York, USA: Routledge (Taylor & Francis Group), 2016.