

## **Digital Finance Transformation during Covid-19 Pandemic: A Case Study on Fintech and E-Commerce**

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### **Abstract**

**Introduction to The Problem:** In 2016-2017 the fintech model in Indonesia was usually in the form of a payment system or online loan service. However, in 2019-2020 the fintech business model had 23 services. After the pandemic in Indonesia in 2020, fintech services continued to overgrow.

**Purpose:** This study aims to explain the positive that the use of fintech has increased dramatically compared to previous years, and one of them is caused by the co-19 pandemic.

**Methodology:** This type of research is qualitative and descriptive, and data collection methods are done with library research.

**Findings:** This study shows that the Covid-19 pandemic made fintech and e-commerce experience a significant increase because these two products accelerate quickly. The use of fintech by both producers and consumers has at least helped people survive the pandemic. Likewise, with e-commerce, people can still meet all their living needs, especially clothing and food. The acceleration of digital transformation in Indonesia predicts that Indonesia will dominate the ASEAN internet economy in 2025.

**Paper Type:** Research Article

**Keywords:** *E-Commerce; Fintech; Pandemic Covid-19*

### **Introduction**

The covid-19 pandemic was first reported in Wuhan, China, in 2019. Since its emergence, the SARS-CoV-2 virus has claimed millions of lives (Liu et al., 2020). Many countries have decided to lockdown as a precautionary measure on this virus. During 2020 sixteen countries have imposed lockdowns, including China, Britain, Italy, Spain, France, Ireland, El-Salvador, Belgium, Poland, Argentina, Jordan, the Netherlands, Denmark, Malaysia, Filipina, and Lebanon(Aida, 2020)

Covid-19 was first detected in Indonesia in March 2020 (Tosepu et al., 2020). Since then, President Joko Widodo has begun implementing various social restriction policies. This policy is contained in Government Regulation No. 21 of 2020 on Large-Scale Social Restrictions to Accelerate the Handling of Corona Virus Disease 2019 (Covid-19) (Pujowati

& Sufaidi, 2021). This regulation allows local governments to restrict the movement of people and goods to enter and exit their respective regions, provided that they have permission from the Ministry of Health.

President Joko Widodo also stated that the covid-19 pandemic is a national disaster, contained in Presidential Decree Number 11 of 2020 (Hasbullah, 2022). This second regulation is based on Law No. 6 of 2018 on Health Quarantine, which will later be used as a basis for enacting Large-Scale Social Restrictions (Widjaja, 2020). Large-Scale Social Restrictions (PSBB) is not a lockdown like other countries apply. PSBB only restricts the social movement of the community, such as the involvement of schools and workplaces, restrictions on religious activities, restrictions on activities in public places and facilities, and restrictions on other social and cultural activities (Andriani, 2020).

Indonesia only enforces PSBB, but the government always calls for people to remain #stayathome. However, people's living needs must still be met. Therefore, people have tried everything through electronic media, such as fintech and e-commerce. The economy and business are important because people must continue to work to make money, even during the Covid-19 pandemic. Likewise, daily needs must still be met in order to maintain survival.

Fintech is a technological innovation developed in the financial field so that financial transactions can be done practically, efficiently, and effectively (Redaksi OCBC NISP, 2021). This fintech product is a system built to run a specific financial mechanism ([www.ojk.go.id](http://www.ojk.go.id)). Meanwhile, e-commerce is a dynamic set of technologies, applications, and business processes to build companies, consumers, and communities through electronic transactions and electronic exchange of goods, services, and information (Rie, 2014).

Bank Indonesia noted that the number of buying and selling transactions in e-commerce has almost doubled amid the covid-19 outbreak. The number of transactions jumped from 80 million transactions in 2019 to 140 million transactions in 2020 (CNN Indonesia, 202 C.E.). Despite the second wave of pandemics, throughout 2021, e-commerce can still contribute 75% to the digital economy. While in the field of fintech, the Financial Services Authority noted that until 2021, the distribution of fintech loans in the form of joint funding to the community had reached Rp. 272.43 trillion, and the value of funding is still running (outstanding loans) is Rp. 27.91 trillion (Hudayanto, 2021). Since the covid-19 pandemic, where physical interaction was restricted, the increase in demand for business credit on digital financing platforms has indeed increased rapidly (Suhartadi, 2021).

The Covid-19 pandemic is not easy for all humans in the world. The loss of a loved one caused by the covid-19 virus is the most painful thing. However, for anyone, life must go on. If humans continue to look for the negative impacts of pandemics, there may be no end. However, there are still positive impacts resulting from this pandemic. The positive impact in the environmental field may be the most important. However, the economic and business fields also provide tremendous benefits for the survival of the world community, especially in Indonesia. According to the author, among the many negative impacts caused by the Covid-19 pandemic, at least the Covid-19 pandemic has had a good impact on the development of fintech and e-commerce worldwide.

### **Methodology**

This type of research is qualitative research is descriptive approach. A description approach is aimed at describing phenomena that exist, which take place now or in the past. This research does not perform manipulation or alteration on free variables but describes a condition as it is. Depiction of conditions can be individual or use numbers – numbers (Sukmadinata, 2012). Descriptive approach can describe a situation only but can also describe the situation in stages of development, so the research is called development research. There are longitudinal or all-time in this developmental study, and some are cross-sectional or in pieces of time (Fitrah & Luthfiah, 2017)

The method of data collection in this study uses library research. In this study, library research is intended as a first step to prepare a research framework and utilize library sources to obtain research data. So, this study limited activities to library collection materials only, without the need for field research. Research data sources are obtained from various sources such as books, thesis, official documents, laws, fatwas DSN - MUI, online reports, online news, and various related articles. The steps in this study are: 1) preparing the necessary equipment, 2) preparing a working bibliography, 3) organizing time, and 4) reading and recording research materials (Zed, 2012)

### **Results and Discussion**

#### **Fintech development in Indonesia during the Covid-19 Pandemic**

Digital technology has driven the progress of developing countries, one of which is Indonesia. Indonesia's readiness to face the digital era in terms of infrastructure today is the existence of 4G internet connections and electronic transactions. The use of smartphones by Indonesian people continues to increase every year, showing that Indonesian people have adopted digital living. Today's internet users make their activities seamless in space and time. Therefore, the Electronic Information and Technology Act continues to be developed to meet the needs of society in the digital era (Wasiaturrahma & dkk, 2019)

Online media has shifted the conventional media of the digital age. Indonesia has made many changes in conveying information; However, Indonesia can be late following the development of information technology, especially the internet, but the Indonesian people are very quick to accept changes in the digital era. The rapid development of technology and its implementation is one of the causes of the digital era (Parsaorantua et al., 2017) such as financial technology (fintech).

Financial Technology (Fintech) is a new technological innovation that seeks to improve and automate the delivery and use of financial services (Popescu, 2019). Fintech can help companies, business owners, and consumers manage their financial operations, processes, and lives by leveraging specialized software and algorithms used on computers and smartphones. Fintech initially emerged as a technological innovation used in the back-end systems of established financial institutions. Today, fintech covers a wide range of sectors and industries,

such as education, retail banking, fundraising and non-profit, and investment management, to name a few (Kagan, 2020)

According to the National Digital Research Centre (NDRC), fintech is an innovation using modern technology in the financial field. In essence, fintech is a technology-based financial service. In contrast, fintech is an innovative service in financial services that uses online systems. Some fintech products are the payment of electricity bills, vehicle installments, or insurance premiums online. In addition, remittances and balance checks on mobile banking are among the fintech products (Fahlefi, 2018)

Fintech functions include payments, money transfers, loan requests, insurance purchases, asset management, and investments. The positive growth of fintech in Indonesia has made many people start using fintech for their transaction services. Another opinion about fintech is a startup that focuses on providing financial services facilities using modern software (Nafiah, 2019)

Currently, fintech has become the world's attention, namely as a technology that business people and companies will widely use to compete with its competitors. Several countries today have paid attention to the opportunities and challenges in determining policies to support the development of fintech, including Malaysia, United Arab Emirates, Abu Dhabi, Dubai, Saudi Arabia, Pakistan, Brunei Darussalam, and Turkey (Yudha, 2021)

The development of fintech has affected various financial services industry sectors, including banking, capital markets, insurance, and other financial institutions. In recent decades, the application of technology and information to financial services has sought to provide innovation, higher levels of technological infrastructure efficiency, system stability, resilience, and security. Today's financial technology provides a variety of innovative new services using a digital set (Yudha, 2021)

The increasingly intense development of fintech from year to year and the role of fintech encourage financial institutions to provide services that provide services with high quality, easy and fast, anytime and anywhere. Therefore, the development of fintech should be used as an opportunity to advance and improve services to financial institutions. In addition to conventional fintech services, there are also Sharia fintech services. Sharia fintech is a digital service on finance using sharia principles (Yudha, 2020)

Fintech makes many contributions to economic development in Indonesia. Some of these contributions include helping to increase investor growth in purchasing retail National Securities (SBN) online. In addition, fintech also assists the government in providing non-cash social assistance to communities affected by the Covid-19 Pandemic. Furthermore, fintech helps small and medium entrepreneurs to provide alternative funding with easy procedures (Kementrian Keuangan RI, 2021).

The use of fintech has indeed increased during the Covid-19 pandemic, thus helping to provide digital financial solutions that can drive Indonesia's economic recovery. Citing Bank Indonesia data, e-money instruments have reached a record high of 412 million in April 2020, which the national PSBB was currently carrying out. According to the Asia Pacific, E-

Commerce and Payment Guide 2020 data, transactions using ATMs and debit cards dropped to about 450 million as of April compared to 550 million in March 2020 (Bareksa, 2020).

Fintech lending is also growing and helping individuals and MSMEs get funding during pandemics. According to OJK data, the number of loans distributed continues to increase. Even in June 2020, the amount reached Rp. 113.5 trillion, equivalent to the US \$ 7.6 billion, or up as much as 152 percent compared to a year ago (year on year). (Bareksa, 2020). Fintech online investment (e-investment) also grew significantly during the pandemic, thus offering new opportunities for national financing. Citing data from bareksa, in October 2019 - June 2020, the amount of funds managed by Bareksa has increased by 31 percent, while industrial funds have fallen by 13 percent. In March - June 2020, there was a significant increase in bareksa managed funds (Bareksa, 2020).

The global fintech industry continues to grow even during a pandemic. In the global Covid-19 Fintech Market Rapid Assessment Study issued in November 2020 by the Centre of Alternative Finance (CCAF), the adoption of digital financial services in developing countries showed an increase, especially digital payments and remittances digital banks, as well as digital savings or deposits. This study further encourages global optimism or the potential of fintech in improving access to financial services, economic inclusion, and construction to the economy (Fintech Indonesia, 2021)

The number of organizers who have licenses and register licenses with the relevant regulators is growing. In addition, the number and volume of transactions in the community are also increasing. The types of digital services and finance are also increasingly diverse. The increase is a sign that fintech in Indonesia is increasingly showing significant growth (Fintech Indonesia, 2021)

The demand, interest, and use of fintech in the community have also increased, such as fintech in payment systems (including e-money and e-wallet), P2P lending, and retail investment in the capital market. In addition, the low-touch concept offered by fintech has encouraged its utilization in society, especially in pandemic times, where the government imposes social restrictions on society. The government also utilizes fintech to distribute social assistance during the pandemic (Fintech Indonesia, 2021).

During the covid-19 pandemic, 52 fintech organizers were the Fintech Association (APTECH). These fintech organizers have provided intensive programs, convenience, and financial solutions for communities affected by their economy. This program continues to be carried out and developed by involving fintech organizers who come from various business models, such as P2P Lending, Financial Planner, Project Financing, Digital Wallet, etc (Kementrian Koordinator Bidang Perekonomian RI, n.d.)

Fintech companies are portrayed as threatening banking and non-banking financial services, as fintech is judged to be faster cheaper, and financial services become personal. The intellectual model applied to fintech is indeed very important in improving fintech in Indonesia, especially in the new normal period of the Covid-19 pandemic. During the Covid-19 pandemic, the government will continue to impose social restrictions, both small and large.

This situation is when we need faster, easier, and cheaper financial services. So. Fintech is the solution (Haryono & Tjahjadi, 2021)

### **E-Commerce Developments in Indonesia during the Covid-19 Pandemic**

Major changes to various sectors worldwide are due to the rapid development of technology. The sectors most affected by technological developments are the banking sector and the economy. Technological developments in the banking sector are experiencing changes in conducting financial transactions. In addition, the development of technology in banking also causes payment systems to become more complex, such as ATM, Mobile Banking, Internet Banking, etc (Bhiantara, 2018).

The development of technology in the economy is one of them is the development of e-commerce (Tahalele et al., 2021). The development of e-commerce in the digital age requires a secure, fast, and confidential payment system. One of the fundamental problems with the development of e-commerce is trust. The development of e-commerce has prompted changes in non-cash means of payment, so it is no longer paperless. One of the burgeoning non-cash means of payment is virtual money (Wasiaturrahma & dkk, 2019).

Virtual money is growing so rapidly among the public as a manifestation of e-commerce. E-commerce is defined as buying and selling activities that use electronic media as an intermediary (Jain et al., 2021). E-commerce has great potential in inviting entrepreneurs to build startups. The startup is a new company that utilizes information technology and the internet to find the right market that operates through the website (Wasiaturrahma & dkk, 2019).

E-Commerce is an electronic trade that includes all forms of business transactions, such as the purchase of goods or services, conducted through electronic means. The use of electronics, such as television, computer, smartphones, and the internet, is predicted to be a means of doing business in the future. Internet users are increasing over time, so trading via electronics can be quickly received. E-Commerce can affect human life more than imagined (US. Department of Commerce, 2000).

Article 1 paragraph (2) of Law No. 11 of 2008 on Information and Electronic Transactions (ITE Law) defines e-commerce as a legal action carried out using computers, computer networks, and other electronic media. Meanwhile, Law number 7 of 2014 on Trade is also mentioned in Article 1. Trading through Electronic Systems (E-Commerce) is a trade whose transactions are carried out through a series of electronic devices and procedures (Nasution, 2019)

An electronic transaction is also a buying and selling agreement similar to conventional buying and selling in general. An e-commerce transaction also contains a principle of consensual, which means agreement from both parties. This offer and acceptance is the beginning of an agreement between the parties concerned. The bidding and acceptance process in general. The difference is only in the media used; in e-commerce media transactions used is the internet (Nasution, 2019)

Before making electronic transactions, the parties should agree on an electronic system to be used to conduct transactions, unless determined by the parties, electronic transactions occur when the transaction offer sent by the sender has been received and approved by the recipient as stated in Article 20 verse (1) of the ITE Law. Therefore, in this case, a new electronic transaction occurs if an offer is sent to the recipient and there is an agreement to receive the offer after the offer is received electronically (Nasution, 2019)

The next stage is after the parties' agreement is reached, namely making payments. Payment can be made by cash system, transfer via ATM, Credit Card. Alternatively, a third-party intermediary such as a joint account, which in this case has been represented by the provider of the buying and selling site. When the payment has been completed, the seller will deliver the goods to the buyer using the delivery service (expedition). Shipping costs can be borne by the buyer or seller, depending on the agreement of the parties (Miru & Yodo, 2010)

During the covid-19 pandemic in Indonesia, increasing e-commerce increased almost 2-fold. The increase is due to the shift in people's habits to conduct digital transactions during the government's implementation of large-scale social restrictions. Some e-commerce companies are also experiencing a huge increase in turnover. In addition to physical distancing, several marketplaces often burn money in promotions. So that it causes people no longer need to go outside the house, all needs can be met through online transactions (Nurlela, 2021)

E-Commerce has attracted many consumers in Indonesia even before the Covid-19 pandemic. E-commerce is also one of the main drivers that make Indonesia the country with the largest digital economy in Southeast Asia, reaching \$40 billion in 2019, and is predicted to increase to \$ 130 billion by 2025. However, when the pandemic hit, many retail stores and consumers were forced to switch to e-commerce. The change is what causes e-commerce to increase.

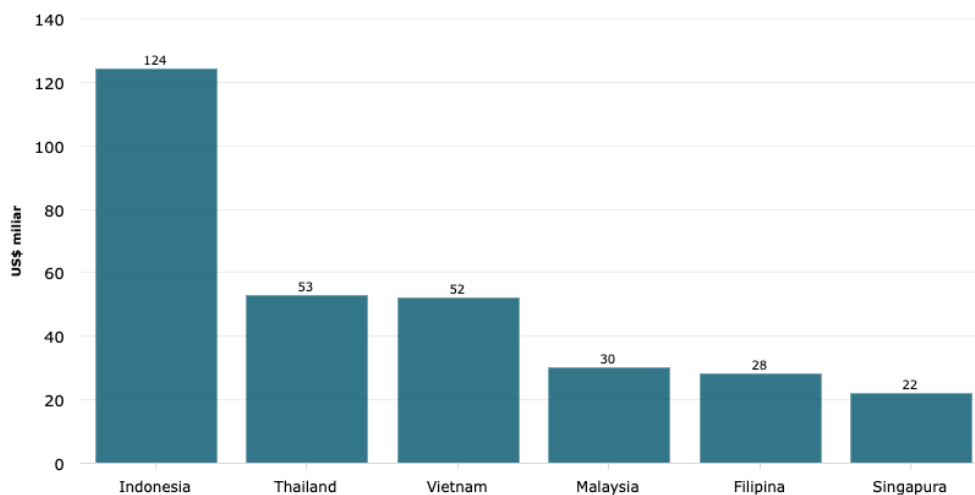
The changing market dynamics caused by the pandemic are also creating opportunities for online food delivery services. Market leaders such as Go-Food and Grab-Food can be accessed through Go-Jek, and Grab has implemented contactless delivery mechanisms and strict hygiene procedures. Hence, industry players say that the food delivery market in Indonesia is expected to double by 2020 due to the covid-19 pandemic (Dinisari, 2020)

Five learnings about E-Commerce 2020 include 1) Online shopping festivals successfully boosted online shopping interest. 2) The development of the e-commerce market outside java island. 3) National TV and KOL / Influencers are increasingly being used to market e-commerce. 4) E-wallets are becoming a favorite payment method for Muslim consumers. And 5) high development of chat commerce and interest in omnichannel solutions (Cahyano, 2021)

There are three new trends in e-commerce in Southeast Asia during the Covid-19 pandemic. This data is considered to be an opportunity for platform providers. The trend is: First, the retail industry is massively turning to digital. Second, the number of sellers is increasing. Third, many consumers spend more time watching videos nowadays, so promoting products through video platforms such as live streaming features will be more

effective (Burhan, 2021). Indonesia is predicted to master the economic value of the internet in ASEAN in 2025.

Prediction of The Economic Value of the Internet in ASEAN Countries (Google, Tamsek, Bain & Company, November 2020)



Source : [databoks.katadata.co.id](http://databoks.katadata.co.id)

In December 2020, the World Bank – in collaboration with Shopee – surveyed more than 15,000 digital traders in Indonesia. They have made more than 30 transactions since joining the shopee platform. Most of them are MSMEs, with a total sales turnover in 2019 less than Rp 50 billion. The survey asked respondents about the impact of pandemics on their operations and business performance, how they cope with pandemics, and government and business support they have and want to receive (Wihardja, 2021).

One important finding from (Wihardja, 2021) is that digital merchants look much more resilient in the Covid-19 pandemic compared to companies that mostly run their businesses offline. Nearly 80 percent of digital merchants surveyed have remained open throughout 2020, since the pandemic first hit Indonesia in March 2020. Not only are digital merchants better able to keep their businesses open during pandemics, but their businesses are also recovering faster.

Wihardja's analysis also suggests that e-commerce became a valuable additional source of income for many new merchants during the pandemic. In Indonesia, as many as 25 percent of all digital merchants are just starting their online business in the pandemic period. They may be encouraged to start a business out of necessity. His research also shows that new merchants are more likely to use e-commerce as additional revenue rather than primary income when compared to pre-existing merchants.

## Conclusion



Fintech and e-commerce are two digital products that benefit from the Covid-19 pandemic. The increasing use of fintech during the Covid-19 Pandemic in Indonesia was due to government policies regarding large-scale social restrictions on society. In 2020 e-money instruments reached record highs. Fintech financing also increased by 152% compared to the previous year. Furthermore, online investment in fintech has also increased significantly. In addition, E-Commerce during the Covid-19 pandemic also grew by 26%. At least during the Covid-19 Pandemic, 3.1 million Micro, Small, and Medium Enterprises transactions were online. This increase was due to the shift in society from offline to online shopping.

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