Financial Technology as a Solution to the Threat of Economic Recession during Pandemic

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A B S T R A C T

The objective of this study was to analyze the effectiveness of financial technology as a solution in facing the threat of an economic recession during the Covid-19 pandemic. The data used in this study was secondary data, data which was obtained in the form of finished data, this data was obtained from the related documents such as articles, books and photos. This study was a qualitative research, since it analyzed in depth on the effectiveness of financial technology in preventing an economic recession during the COVID-19 pandemic. The data analysis in this study was carried out interactively using data reduction, data presentation and data verification. The results of this study showed that the financial technology (fintech) is a solution to the threat of economic recession during a pandemic, this was possible since fintech is an industry engaged in a financial services with minimal interaction so that it is very suitable for the health crisis conditions which oblige the public to always maintain health protocols by doing social distancing. The fintech industry can be utilized in payments and transfers by governments, businesses and households, as well as credit for businesses and households..

Keywords: Q Methodology, Social Work

1. Introduction

The coronavirus COVID-19 pandemic is the defining global health crisis widely felt by almost all people in the world and Indonesia is no exception. Covid-19 emerged based on information submitted by the World Health Organization (WHO) on December 31, 2019 about a case of lung inflammation (pneumonia) with a new etiology occurring in Wuhan City, Hubei, China and an increase in cases outside of China. Covid-19 was declared an international emergency case for public health (Public Health Emergency of International Concern) on January 30, 2020 due to the increasing spread of this case. Indonesia is reporting for the first time about 2 positive cases of Covid-19 on March 2, 2020 and it continues to increase. Covid-19 cases up to September 30, 2020 have reached 287,008 positive cases with 10,740 dead and 214,947 cases experiencing recovery (Indonesian Ministry of Health, 2020).

In fact, Covid-19 does not only have an impact on the health aspect, but in the economic field it has a negative effect. Based on the assessment report on the impact of the COVID-19 outbreak published by the Organization for Economic Co-operation and Development (OECD) on March 2, 2020, it shows that there has been a decrease of 0.5 points from the initial estimate of 2.9% global growth in 2020 to 2, 4%, or nearly half to 1.5% in cases of a prolonged global outbreak (OECD, 2020). The Asian Development Bank (ADB) recently released the Asian Development Outlook 2020 in connection with the Covid-19 outbreak, it is estimated that the economy will experience 2.2% growth for Asia and 1.0% growth for Southeast Asia with the support of the Chinese economy. These low projections indicate the extent of the impact of the outbreak. Assuming that the pandemic can be contained this year and does not have a serious effect on the financial system, recovery can be carried out next year and Asian countries can grow 6.2% (ADB, 2020).

The Covid-19 pandemic in Indonesia has resulted in the potential for Indonesia's economic growth under the worst-case scenario to decrease by 0.4%, while the optimal scenario is projected to be only 2.3%. Based on the aspect of household consumption growth, the growth scenario is considered to be

slowing, namely the optimal scenario is 3.2% and the worst scenario is 1.6%, while for government consumption growth it only grows 6.83% or the worst scenario is 3.73% (Data Word, 2020). In areas that apply Large-Scale Social Restrictions (PSBB), of course, have an impact on the economy. One of the area that implements the PSBB, Jakarta, is to calculate scenarios so that the results obtained do not stop total economic activity. Based on the calculation, it is estimated that 75% of the worst-case scenario economic activity stops for 14 days, which implies -2.78% for Gross Regional Domestic Product (GRDP), and a decrease in household income by -2.77%. When viewed from employment, it will have an impact on 1% of employment terminations based on the trade, hotel and restaurant sector, transportation and communication, services, industry, electricity, gas, clean water and quarrying and the mining sector. The result of employment termination is expected to affect economic growth -0.8% (CNBC, 2020).
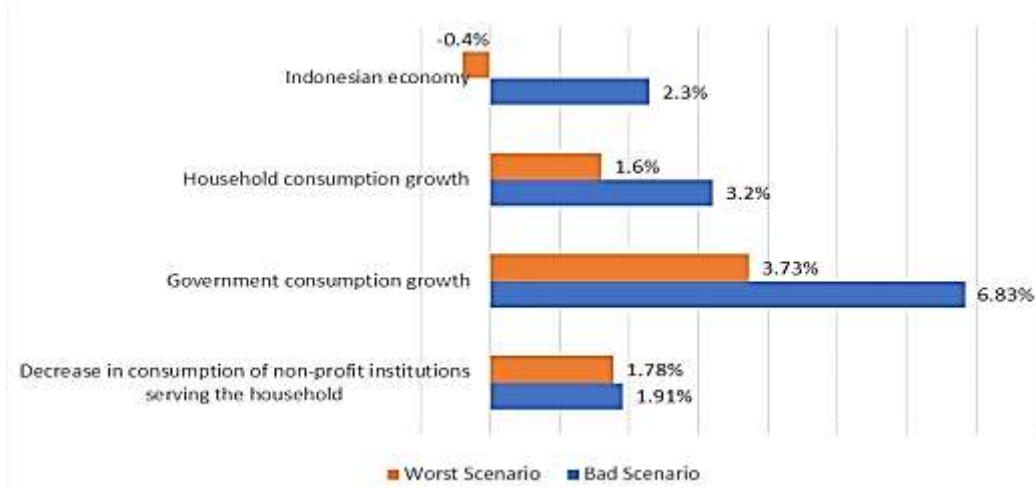

Figure 1. The Scenario of the Economic Growth

The phenomenon of society shows that the use of financial technology (financial technology) has increased during the Covid-19 pandemic, thus providing digital financial solutions that can encourage the economic recovery if Indonesia.

Figure 2. Fintech of Indonesia

Based on the graph that shows that fintech in Indonesia has increased significantly from month to month, this is supported by the increasing number of accounts for both lenders and borrowers, Indonesian people are starting to feel the importance of using fintech in their activities. The existence of Fintech

for MSMEs in developing their businesses which in turn can increase their business capacity. This is shown by the graph of the increase in MSMEs where in January 2018 MSMEs totaled 14,190,000 and in July 2019 as many as 15,540,000, so from these data the accumulated number of MSME accounts increased which had an impact on the increasing of Gross Domestic Product (GDP) of Indonesia.

2. Literature Review

Financial Technology (Fintech)

Fintech is a discussion that has been quite viral in recent years, even though the concept of fintech is not something new. Looking back at the history of the first communication via transatlantic transmission cables on August 16, 1958, it is known that communication between North America and Europe, which originally took 10 days (sending messages by ship) to 17 hours, facilitated the development of global telecommunications and then increased to financial services that are currently known as fintech (Nicoletti, 2017).

Fintech is a cross-disciplinary subject that combines finance, management, technology and innovation. Based on this understanding, it can be further explained that fintech is any innovation idea in improving the financial service process by adopting technology according to different business situations, so as to create a new business model (Leong and Sung, 2018). The current implementation of fintech is indicated by the existence of online transportation payment services, because online transportation service providers are implementing innovative ideas by adopting technology (mobile applications) in improving ordering services and payment transactions. The reality in some big cities, some online transportation companies offer transportation service prices that are indicated at the beginning, so that customers can pay the tariff before using transportation services. Thus, fintech can serve as an innovative reference in helping businesses to rethink new business models that are more effective and efficient in financial services.

In its application, Fintech can be used daily to obtain financial service facilities in various aspects, such as follow:

     1.   Fintech as a means of payment

Fintech as a means of payment is a major development trend, more and more companies have developed related payment solutions for their customers. This is as done by Starbucks, which has developed a payment application. Based on data from the company's financial statements, payments made via mobile increased by up to 30% of transactions in US-operated stores. This is due to the increasing number of payment solutions that allow users to process electronic payments smoothly, as well as future studies including data transmission technologies, security issues, user experience, data analytics techniques and so on.

     2.   Fintech as a consulting service

Fintech as a consulting service refers to providing suggestions to users according to predetermined rules and criteria. Consulting services cover all types of services such as investment consulting, asset management consulting, insurance services, customer support and management decision making. FinTech has been seen as a form of innovation in the consulting services sector. The development of the internet, computers that can be installed with sophisticated sensors, artificial intelligence, machine learning, big data, sophisticated algorithms, automation and so on are emerging directions for future studies related to consulting services. Furthermore, in the future consulting services solutions should focus on how to improve processes in terms of personalization, cost reduction, flexibility, automation, improved user experience and all kinds of financial decision making, etc.

One of the sub-topics of consulting services is robo advisor. Robo advisor functions as a financial advisor providing automated financial advice or investment management for clients. Based on advanced technologies, such as artificial intelligence, big data and machine learning, Robo-advisors can provide clients with personalized advice in a more effective way, while advice can also be updated according to real-time data (e.g. the latest oil price fluctuation or stock index , and others). In addition, there is also an insurance service application that involves using a computer that can be installed with sensors (such as a hand belt with a digital device) to send the user's health data to an insurance company, so that a personalized insurance package can be designed (Sironi, 2016).

     3.   Fintech as a means of financing

Financing refers to any act of obtaining funds for business activities from various sources. There are various traditional sources of finance, such as family, bank loans, profits, venture capital, franchises, government funds, stock markets, bonds, bonds and many others. The development of FinTech provides many alternatives to new financing methods, such as financing channels that are outside the traditional system. For example, crowdfunding provides an alternative way for businesses to raise funds at lower costs or in ways that were not traditionally possible. In fact, crowdfunding is also considered one of the most popular types of alternative finance (Assadi, 2015). Crowdfunding is also an effective tool for start-ups and entrepreneurs to bridge the funding gap between the initial stages of funding and subsequent capital growth (Scholz, 2015).

Future developments in FinTech technology are directly or indirectly related to improving the process of sharing information, lowering transaction costs, enabling new financing alternatives or supporting better financing decision making. In practice there are many possibilities to increase financing, for example one company can increase financing by better managing its inventory levels, therefore the Radio Frequency Identification (RFID) system can also be considered as a solution to improve business models by means of FinTech.

     4.   Fintech as regulatory compliance

Compliance refers to compliance with a set of rules, such as specifications, policies, standards or laws. Today, compliance is a major business process for many businesses. In this case, using technology to improve regulatory processes is also called RegTech (Regulatory Technology) [27]. While the compliance processes can reduce risk, increase trustworthiness, and reduce transaction costs (for example, companies with reliable financial records can borrow money at lower costs), compliance processes often do not directly add value to business. Hence, from a business point of view. Increasing the compliance effectiveness is a process of how to use lower costs to complete related tasks or how to use technology to do compliance work that humans cannot easily do in the traditional way. Robots, drones, mobile devices, CSCW (Computer supported cooperative work), artificial intelligence, data, advanced algorithms and so on are emerging directions for future studies related to compliance.

Economic Recession

Recession is a macroeconomic term that refers to a significant decline in economic activity for two consecutive quarters, which is reflected in the Gross Domestic Product (GDP). This decline usually affects five economic indicators, namely real GDP, income, employment, manufacturing and retail sales. A recession is also defined as a condition where GDP has decreased or real economic growth is negative for two consecutive quarters or more than one year (Anshori, et.al, 2020).

The media predict that the Coronavirus pandemic will lead to a recession, which is certainly an unmistakable observation, as questions point to an increasing number of infections in most countries, school closings and promoting social distancing measures, as well as a sharp decline in global stock exchanges (Ramelli & Wagner, 2020). The impact of a pandemic on the economy will be very significant, given the scale of the epidemic and the vulnerability of the economy (Leiva-Leon, Pérez-Quirós, & Rots, 2020). Some incomes hope that the effect will be limited to China, but the scale and pace of development of the pandemic has consequences for the global economy (Brightman, et.al, 2020; Ayittey, et.al, 2020; Khan & Fahad, 2020). It happened in a cruel, unpredictable way and within three months took on a global scale (Sapovadia, 2020). Fornaro and Wolf believe that the shocks caused by the coronavirus will not only cause a supply and demand crisis, but will also have a significant impact on job growth and productivity. This can be happened since the economic observers feel pessimistic about the future productivity growth (Fetzer, et.al, 2020). Interest rates are below zero, causing the central banks to be unable to ward off effectively, jobs and economic activity are falling sharply, companies react by cutting investment, which negatively increases productivity and in turn can lead to recession (Fornaro & Wolf, 2020). Thus, the financial condition with the development of quarantine, the economies of each country enter a phase of stagnation and even recession, thus allowing a global recession.

3. Research Method

Type of Research

This study applied a qualitative research type, which is a research method based on the principles of an interpretive and constructive paradigm, which sees a social reality as a holistic, complex, dynamic, full of meaning and symptomatic relationships that have an interactive nature so that it can be used to conduct research with natural object conditions with the researcher as the key instrument. This study used a qualitative method since it analyzed in depth about the effectiveness of financial technology in preventing an economic recession during the Covid 19 pandemic.

The data used in this study were secondary data, obtained in the form of finished data, this data was obtained from the related documents such as articles, books and photos.

Method of Data Analysis

The data analysis in this study was carried out through three stages of activity, data reduction, data presentation and drawing conclusions or verification. Data reduction is the process of summarizing the research data that focuses on aspects that are considered important by the researcher, the presentation of data is the preparation of a description or the research report, while verification is the giving of meaning to the data obtained from the research results.

4. Analysis and Discussion

The health crisis that occurred globally in the first quarter of 2020 had an impact on the economic performance of Indonesia. The Indonesian economy experienced a growth of 2.97 percent and almost all sectors experienced slowing growth. This is due to a decline in the global and the domestic demand as well as the weak international commodity values. Despite the decline in the economic growth, this condition is still better than performance conditions in other countries.

Figure 3. Indonesian economic growth
(Source: Central Bureau of Statistics, 2020)

The Indonesian economy is largely supported by the manufacturing, trade and agriculture sectors, despite slowing growth. There are several economic sectors that continue to experience faster growth, including financial services and insurance, information and communication, education services, health services and social activities.

The growth that occurred in the processing industry was 2.1 percent, slower than in the previous period mainly due to the slower growth of the non-oil and gas processing industry. The slow growth in the non-oil and gas industry was caused by contraction in imports of raw materials during the first quarter of 2020 accompanied by slow non-oil and gas exports. The majority of the non-oil and gas industry contracted. The food and beverage industry which has a fairly large role in the non-oil and gas industry also experienced slow growth from 6.8 percent in the first quarter of 2019 nebhadu 3.9 percent. Despite the slow growth, the chemical and transportation equipment industries are still growing positively. In the coal sector and oil and gas refineries, they experienced a positive growth of 2.6 percent after contracting in the first quarter of 2019, this is due to an increase in the production of fuel oil and LPG.

Figure 4. The Growth of GDP in the Production Side in the Quarter I of 2020
(Source: Central Bureau of Statistics, 2020)

One of the sectors that has become a concern during the economic slowdown is the financial services and insurance sector which experienced growth of 10.7 percent, much higher than the first quarter of 2019 which was only 7.2 percent. Financial intermediary services grew by 13.7 percent as well as a stimulus in the growth of the financial services sector. In the same period in 2019, financial intermediary services grew by 7.0 percent.

This growth in the financial services and insurance sector cannot be separated from the existence of financial technology (fintech). The fintech industry is experiencing a fairly rapid development in Indonesia, this is indicated by an increase in the accumulated amount of loans and the accumulation of borrower accounts. The Covid-19 pandemic has had a significant impact on the fintech industry, this is evidenced by an increase in the non-performing financing, where in the first quarter of 2019 the amount of non-performing loans increased by 2.6 percent to 4.2 percent in the first quarter of 2020. This is certainly understandable due to the decline in the ability of debtors to pay the financing due to the economic downturn due to the Covid-19 pandemic, resulting in an increase in the ratio of problem financing.

The fintech industry continues to survive in the midst of the Covid-19 pandemic, this is shown in the first quarter of 2020, the amount of accumulated distribution of loans increased by 208.8 percent, from IDR 33.2 trillion in the first quarter of 2019 to IDR 102.5 trillion in the first quarter of 2020. The increase that occurred in the accumulated loan amount turned out to be relevant to the accumulation of the number of borrower accounts, this was indicated by an increase in the number of borrower accounts by 247.0 percent, namely from 7.0 million accounts in the first quarter of 2019 to 24.2 million accounts in the quarter I year 2020. This increase in the accumulation of accounts on borrowers shows a positive development in encouraging financial inclusion in Indonesia.

The fintech industry continues to experience a positive growth due to the increased use of digital financial services during the Covid-19 crisis in various fields, including payments and transfers by the government, business and households, as well as credit for businesses and households.

1. Payments and transfers by the government

The government is already making digital payments and transfers to households and businesses. Government payments to the community, usually referred to as G2P (Government to person), are assistance from underprivileged families such as the *Program Keluarga Harapan* (PKH) and Community Temporary Direct Assistance or BLSM (Bantuan Langsung Sementara Masyarakat), including payments (transfers) of tax returns, subsidies, social programs, salaries, allowances, pensions, scholarships, and emergency assistance. According to the 2017 Global Findex Survey, about 16 percent of individuals received government payments or digital transfers during the year. The examples of digital G2P payments before COVID-19 include the PKH and BLSM programs in Indonesia (providing monthly transfers for low-income families via electronic benefit cards issued by the state-owned financial institutions), direct electronic payments to bank accounts of federal government goods and services providers, and payment of salaries to the accounts of most federal employees, and use of electronic means of paying government salaries, pensions, tax returns, and other G2P payments (Gelb and Groen, 2019).

Payments to businesses from the government (government to business) are also increasingly being channeled using the digital payment methods, including in developing countries. In the case of Peru before Covid-19, 59 percent of local government G2B procurement payments were made by check and 41 percent via electronic transfer (Better Than Cash Alliance, 2016).

Fintech can thrive during the Covid-19 pandemic since the digital payments is able to support the social distancing measures imposed in some countries and help to reduce the spread of Covid-19. Digital payments enable payment transactions to continue and financial support reaches people in need, when other forms of payment have become impractical due to health protocols. Paying public salaries and other public transfers (both G2P and G2B) digitally is also more cost effective.

Digital payment technology increases the ability to target cash transfers to the public, especially the unbanked and some in the informal sector. This technology can also increase the speed of transfer, which has special value in the Covid-19 crisis, because the informal sector in many developing countries is in dire need of assistance (IMF, 2020). the examples of specific uses in China (consumption coupons funneled through Alipay and WeChat payments), India (transfers via accounts linked to Aadhaar), as well as Colombia, Morocco, Peru, and which have expanded or made use of the existing digital payment systems, especially to the informal sector (Gentilini, et.al, 2020).

The development of fintech is able to provide the government with better tracking of people's consumer spending patterns in real-time. This may occur after a central bank issues a digital currency (CBDC), where transactions can be tracked or if the digital service providers are willing or required to share data with the government. In doing so, it can help to inform which sectors experienced the largest decline in the consumption, based on the records of payment transactions, so that the best places to target government aid to companies are identified. If the payment data can be tracked, it will allow the government to see either the transaction value, or the details of transaction volume and prices across various sectors, this can also help to identify quickly where production bottlenecks are occurring. The collection and disclosure of such data, however, will depend on the country information and privacy laws.

2. Business Payments

Paying wages and paying taxes during the Covid-19 pandemic must meet the health protocols, such as ensuring the social distancing. It is not only cost-effective but also safer. Compared to cash payments and checks, digital payments on salaries, taxes and transfers to individual employees, governments, and other businesses benefit both payer and payee by maintaining the social distance. Distributed computing has the potential to transform payment and settlement of securities and backoffice functions by reducing costs and enabling direct business-to-business (B2B) transactions bypassing intermediaries. Bypassing intermediaries may be beneficial if intermediaries are affected by the Covid-19 crisis. For example, a bank might process payments more slowly due to staff shortages due to quarantine or illness. In addition, certain types of payments, especially cross-border transactions, can involve chains of intermediaries, including correspondent banks, which are vulnerable to global economic conditions. For example, after the global financial crisis, correspondent banking relationships with smaller developing countries diminished.

3. Payments and transfers by the community

Minimal touch digital payments for community transfers and in-store purchases can help maintain social distancing and reduce the potential for the spread of Covid-19. The existing modalities for the digital payments (debit/ credit cards, internet banking, mobile wallets, digital payment applications, ATM services, and bank prepaid cards, mobile) are increasingly being used by people around the world. For example, a recent survey of Indian households showed an increasing use of transactions made using digital payments during the Covid-19 crisis.

Currently, some governments provide incentives to pay for goods or services digitally, via mobile money or electronic wallets. For example, Uganda has cut mobile money transfer fees, Egypt, Liberia, and Myanmar have increased transaction size limits, while authorities in Bangladesh, Cameroon, Democratic Republic of Congo, Ghana, Kenya, Mozambique, Pakistan, Rwanda, Senegal and Zambia have taken both sets of actions (cutting cellular transfer fees and raising transaction size limits) in response to a pandemic (Goodwin-Groen, 2020). As the dependence on providing goods and services online during the pandemic increases, there will be a greater need for the digital payment methods that are compatible with online usage.

The digital forms of payment, including mobile money and digital currency, can facilitate the processing of remittances in times of crisis. This is especially the case when traditional forms of remittance require physical queues (Garcia and Rutkowski, 2020). The digitization of person to government (P2G) payments, apart from benefiting from social distancing, has scope for increasing tax revenues. The digital tax payments is able to increase the visibility of tax payments, which can help to fight the tax evasion and corruption. For example, the digitization scheme for the payment of municipal taxes

in Senegal increases the tax revenue in three months (Sock, et.al, 2018). Higher tax revenues could be critical during an ongoing pandemic given the sizeable fiscal expenditure needs that most governments will face.

4. Credit for business

Various technologies can be useful for providing loans to businesses, especially in times of crisis. For example, machine algorithms that can help non-bank lending platforms and digital banks that provide loans to SMEs assess business creditworthiness remotely and distribute loans quickly by automating the maturity process of persistence (Bazarbash, 2019). Big data analytic can enable the automation of credit approvals, facilitate regulatory compliance and fraud detection. Fintech companies that combine the provision of other services, such as payments or social media, with credit can take advantage of data sources that other lenders cannot provide, depending on data and privacy regulations, and competition policies.32 Providing such credit can be particularly important in the informal sector, for SMEs and for the smallest entrepreneurs for which relatively little public information is available, and who may face difficulty accessing credit through the traditional bank channels. This consideration becomes even more important during crises when information asymmetry can strengthen the credit rationing. In the case of China, the reliance on fintech-based credit provision has been found to increase the shock resilience of SMEs, both before and during the current pandemic (Huang, et.al, 2020). Providing contact-less digital credit to businesses could also help to enforce the social distancing during the Covid-19 crisis, by reducing the need for entrepreneurs to physically go to the bank to interact with or send documentation to the loan officers.

5. Credit to the community

Person-to-person (P2P) lending platforms can offer benefits, and this can increase in times of crisis. The lending platforms of P2P operate with lower overhead costs and provide cheaper services than traditional financial institutions. Small to medium sized lenders participate in the platform. Lender software providers create solutions to process loans faster, and lenders are trying to enter new markets and demographics. In times of crisis, when bank financing may be more difficult to undertake, acquiring such a platform can provide a potential alternative source of credit for some communities and businesses, which would otherwise be rationed due to their small size and the potential lack of documentation. Providing contactless digital credit for households could also help enforce social distancing during the Covid-19 crisis, by reducing the need for households to physically go to the bank to interact or send documentation to loan officers.

5. Conclusion, Limitation, and Suggestion

The results of this study indicate that financial technology (fintech) is a solution to the threat of an economic recession during a pandemic. The fintech industry continues to experience growth at a time when several industrial sectors are experiencing a slowdown in growth, this is because fintech is an industry engaged in financial services with minimal interaction so that it is very much in line with the health crisis conditions which oblige the public to always maintain health protocols by conducting social distancing. The fintech industry can be utilized in payments and transfers by governments, businesses and households, as well as credit for businesses and households.

This research has limitations, including the collection of data in this study based on documentation from various articles and journals caused by the Covid-19 pandemic health crisis condition which makes researchers unable to conduct direct observations in the field to obtain supporting data. This study also refers to various national and international journals. In this case, the conditions are slightly different when compared to the conditions in Indonesia, therefore, it requires a deeper study with more comprehensive quantitative testing.

Based on the results of this study, it is suggested for the further research to be able to carried out more deeply research by making extensive observations in the community, so that the results will be obtained in accordance with the real conditions of the society. The researcher also suggest for the public and the government not to use fintech in a consumptive form, but to be more productive in increasing and driving the economy of the community during the COVID-19 pandemic health crisis.

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