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PESTLE ANALYSIS OF FINANCIAL TECHNOLOGY IN INDONESIA

Eko Riwayadi[1*], Siti Awaliyati Deliabilda[2], Maeyer Beni Panahatan[3]
[1,2,3]*Management / Postgraduate Program, Pelita Bangsa University, Bekasi*

Author's email: eko.riwayadi@mhs.pelitabangsa.ac.id; deliabilda@mhs.pelitabangsa.ac.id; maeyer.tbn@mhs.pelitabangsa.ac.id
**Corresponding author: eko.riwayadi@mhs.pelitabangsa.ac.id*

Abstract

Background
During the COVID-19 pandemic, FinTech plays an important role in supporting economic activities, especially for digital transactions and online loan disbursement. On the other hand, this pandemic is also affecting FinTech providers due to increased market risk, changing business procedures that affect operations, as well as many expansion and investment plans being delayed. In order to develop and be able to compete, it is necessary to analyze external factors so that the strategies made are right on target.

Objectives & Methodology
The purpose of this research analyze external factors at a macro level in the era of the COVID-19 pandemic and their implications for the development of FinTech in Indonesia.This research method uses library research with a qualitative approach and is analyzed using PESTLE Analysis. PESTLE Analysis is used to analyze political, economic, social, technological, legal, and environmental factors.

Research result
The results of the PESTLE analysis show that the development of FinTech in Indonesia receives positive support from political, legal, and environmental factors, such as the formulation of the National Financial Inclusive Strategy, the allocation of a large enough fund for FinTech development, the existence of various regulations governing the operation of FinTech which are continuously updated following developments and the government's commitment to expand the reach of information technology throughout Indonesia through the Palapa Ring. However, several aspects of economic, social and technological factors, such as poverty, low financial literacy, low data security, can hinder the development of FinTech in Indonesia.

Keywords: *PESTLE Analysis, Financial Technology, FinTech, external factors*

1. INTRODUCTION

Financial technology (FinTech) is the use of technology in providing solutions in the financial sector (Arner et al., 2017). Financial technology (FinTech) in Indonesia has developed following consumer needs, policies, and existing technology infrastructure. Not only covers digital payments (Bank Indonesia Regulation No. 18/40/PBI/2016) and online loans (Financial Services Authority Regulation No. 77/POJK.91/2016), but also includes Digital Financial Innovation (Financial Services Authority Regulation No. 13/POJK.02/2018) such as investment management, insurance, and digital financial support, as well as crowd funding services in the form of shares (Financial Services Authority Regulation No. 37/POJK.04/2018).

In addition to the scope of service, the number of licensed FinTech startups continues to grow. Based on data from members of the Indonesian FinTech Association (AFTECH), the number of members in 2014 was only 24 Fintech, in 2019 it reached 276, and in the second quarter of 2020 it increased to 362 members. The number of AFTECH

members can be an illustration of the development of FinTech startups in Indonesia because AFTECH members represent 80% of all licensed FinTech startups(Indonesian Fintech Association, 2020).

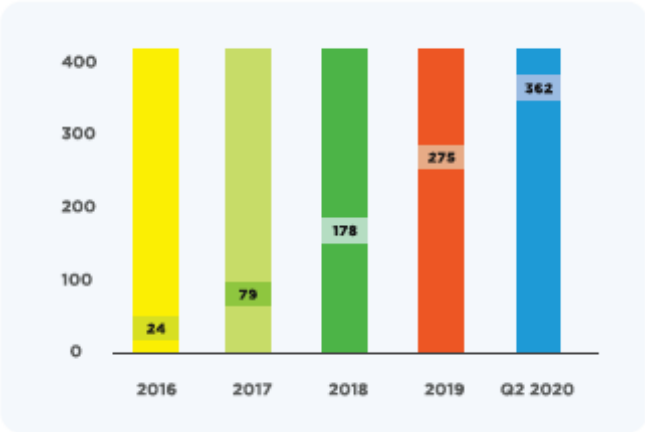

Figure 1. Increasing Number of AFTECH Members from Year to Year
Source: (Indonesian Fintech Association, 2020)

The growing number of mobile and internet users is boosting FinTech forward (We Are Social; Hootsuite, 2020). As many as 45% of 400 million active mobile phone users use handphone with smartphone types(APJII, 2019).

In the midst of increasing FinTech startups from year to year, on the other hand the index of bank account ownership in Indonesia has only reached 61.7%. (Financial Services Authority, 2019). This means that over 40% of the population does not have access to financial services. FinTech is critical in bridging wider financial access, particularly for those who have never used banking services, such as the unbanked and underbanked. It can be seen from the segmentation of FinTech customers in Indonesia that 41% of them are underbanked customers(Cambridge Center for Alternative Finance, 2019).

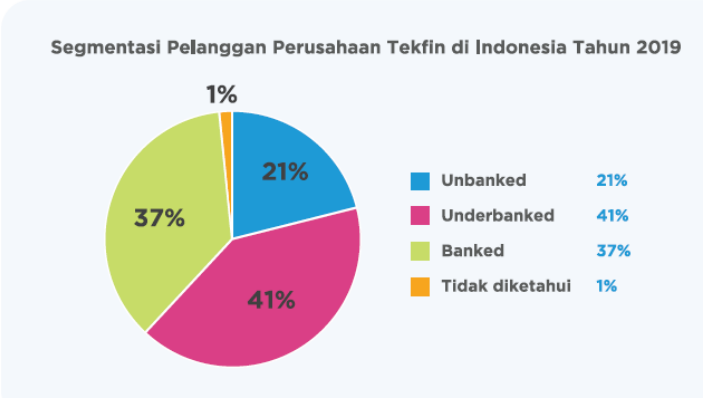

Figure 2. Customer Segmentation of FinTech Companies in Indonesia in 2019
Source: Cambridge Center for Alternative Finance (2019)

During the COVID-19 pandemic, FinTech plays an important role in supporting economic activities that minimize physical touch (low touch economy). The total value of e-Money transactions, a form of digital payment, during January to June 2020 reached IDR 93 trillion with the highest total transactions occurring in April 2020 of IDR 17.55 trillion.(Bank Indonesia, 2020). In addition, online loan disbursement has also increased. The total disbursement during January to June 2020 was IDR 113.46 trillion, whereas in January to December 2019 it was IDR 81.5 trillion. This is because the number of borrowers has also increased. During January to December 2019 there were 18.5 million borrowers, while January to June 2020 there were 25.7 million borrowers(Financial Services Authority, 2020). On the other hand, this pandemic has also affected 70% of FinTech providers' revenue. Market risk has increased, business procedures have

changed, affecting operations, and many expansion and investment plans have been delayed (Indonesian Fintech Association, 2020).

In Indonesia, the widespread usage of FinTech has not been matched by a high level of public literacy. According to data Financial Services Authority (2019) the financial literacy index in 2019 was only 38.03 percent. Financial literacy, on the other hand, plays a role in increasing consumers' and the general public's knowledge, confidence, and skills in order for them to better manage their finances.(Financial Services Authority, 2017). Financial literacy also spurs individuals to have financial plans in the future that are in accordance with the patterns and lifestyles they live(Yushita, 2017).

Low levels of financial literacy and lack of financial literacy can make people trapped in various illegal financial services (Yushita, 2017), especially FinTech services. Moreover, 54% of FinTech users are people with income below 15 million/month or middle to lower income (Indonesian Fintech Association, 2020).

Throughout 2016 to 2020, the Financial Services Authority has closed at least 4,394 forms of illegal digital financial services (Financial Services Authority, 2020). The total loss to society due to illegal investments over the last 10 years is Rp. 114.9 trillion. This shows that the security of financial services is still not optimal and needs to be improved.

In addition, FinTech users are also still uneven and dominated by people who live in Greater Jakarta (41%), Bandung (13%), Surabaya (12%), and Medan (8%) (Indonesian Fintech Association, 2020). One of them is caused by a technological infrastructure gap and a less supporting internet connection network (Marginingsih, 2019).

Based on the above mentioned, the development of FinTech in Indonesia continues to face a variety of opportunities and challenges, particularly in the midst of the COVID-19 pandemic. To maximize opportunities and minimize obstacles in the development of FinTech in Indonesia, strategies and risk management are required. Several previous studies on the analysis of FinTech strategies in Indonesia have been carried out (Luckandi, 2018; Marginingsih, 2019; Nafiah & Faih, 2019). However, so far no one has conducted an overall FinTech analysis in Indonesia by analyzing external factors on a macro basis through PESTLE analysis. Previous research was made specifically about FinTech in certain companies, such as GOJEK, Kaskus, and banking, and used more SWOT analysis and literature studies (Miswan, 2019; Paramadita et al., 2020; Widhiyaningrum et al., 2019).

In other countries, PESTLE analysis is used to analyze external factors in the development of FinTech in various countries (Alsaffar, 2020; Faccia & Cavaliere, 2021; Li, 2018; Phan, 2021; Moro-Visconti, 2021). PESTLE analysis needs to be used because it helps companies or organizations to analyze the potential changes facing the industry in the future (Zhegalina, 2020). In addition, to gain competitive advantage, external factors are considered more important to analyze than internal factors and PESTLE analysis is one of the tools to analyze this strategy (David & David, 2017).

Therefore, researchers are interested in analyzing macro external factors in the COVID-19 pandemic era and their implications for the development of FinTech in Indonesia by using PESTLE Analysis. The scope of the PESTLE analysis includes political, economic, social, technological, legal, and environmental factors. This research is expected to be a reference in formulating a strategy for developing FinTech in Indonesia.

2. LITERATURE REVIEW

2.1 Strategy

Strategy is the concept of decision-oriented, integrated, and centralized, and externally oriented to achieve organizational goals in carrying out its activities. Each strategy must be properly identified, supported by strong leaders, and take into account the opportunities and circumstances of the environment in order for it to be effective. (Assauri, 2013). Strategic management is the formulation, implementation, and

evaluation of strategies. The strategic management process is divided into three stages: strategy formulation, strategy implementation, and strategy evaluation to achieve organizational goals. Strategy formulation includes establishing a vision and mission, identifying the organization's external opportunities and threats, determining internal strengths and weaknesses, developing long-term goals, initiating alternative strategies, and selecting specific strategies to achieve those goals. (David & David, 2017)**.**

Strategy is defined as an organization's way of achieving its goals in accordance with the opportunities and threats faced by the external environment as well as the organization's internal resources and capabilities (Ahmad, 2020). The basic principle of strategic management is to formulate strategies to take advantage of external opportunities and to avoid or reduce the impact of external threats. The process of identifying external factors is more important to gain competitive advantage than internal factors (David & David, 2017).

Tools that can be used to perform strategic analysis include SWOT analysis, CPM (Competitive Profile Matrix), Porter's Five Forces Model, PESTLE Analysis, BCG Matrix, GE Mc-Kensey Matrix, Internal-External Factor Evaluation Analysis, and profitability matrix. Analysis to identify external factors including Porter's Five Forces Model, PESTLE analysis, CPM, and External Factor Evaluation (Assauri, 2013; David & David, 2017; Wardoyo, 2011).

Based on the above theory, strategy can be defined as a decision oriented towards achieving organizational goals through the stages of strategy formulation, implementation, and strategy evaluation by identifying internal and external factors. However, the identification of external factors, using strategic analysis tools, is more important in achieving competitive advantage.

2.2 PESTLE Analysis

PESTLE analysis, when combined with SWOT analysis, is a powerful tool for understanding the environment or context in which change is taking place or is being contemplated. (Gill, 2011). PESTLE analysis is an analytical tool used to understand the broader macroeconomic and social context by measuring current and future markets. Understanding long-term trends and their implications can guide strategic decision making (Peppard & Ward, 2016).

PESTLE analysis is a method for analyzing the political, economic, social, technological, legal, and environmental factors that influence organizations and countries. The application of PESTLE analysis helps identify and optimize opportunities in the market based on the existing business environment conditions so that future decisions can be more effective, help understand the program more deeply so that they are able to develop strategic plans that are right on target, and can be better prepared to face threats and dangers that may be faced. during the operation (Johnson et al., 2017; Paul, 2014).

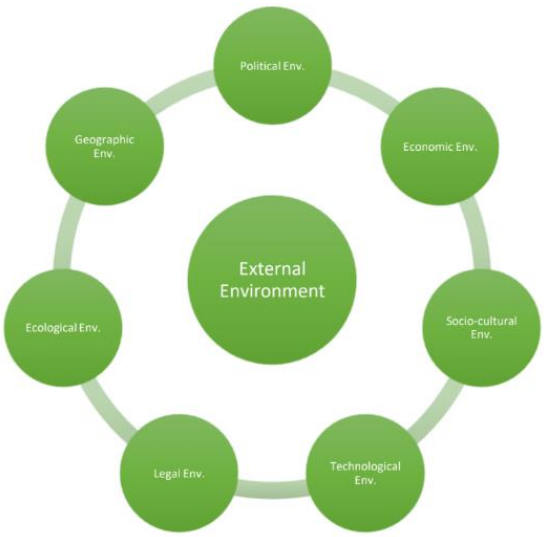

Figure 3. PESTLE Analysis

PESTLE Analysis evaluates six external factors in the macro environment (Johnson et al., 2017; Peppard & Ward, 2016), that is:

1) Political
   Political factors evaluate the extent to which government policies can have an impact on the program. Government policies, legal issues, and formal and informal rules such as government stability, foreign trade regulations, social welfare policies, and tax policies are parts of political factors.

2) Economics
   Economic growth, exchange rates, inflation rates, interest rates, consumer income, and unemployment rates are all economic factors. This factor may have an immediate or indirect effect. This economic factor comprises all of the factors that influence a company's business climate.

3) Social
   Social factors include factors that influence customer needs and the size of the existing market share. The demographic characteristics, norms, customs, and values of the population in which the organization operates are among these factors. Population trends such as population growth rate, education level, age distribution, income distribution, career attitudes, and safety are all included.

4) Technology
   It is concerned with innovations in technology that affect program operations. The technological aspect is seen from how much government spending on technology research, the existing technology life cycle, the role of the internet and the impact of its changes on business, the level of obsolescence, the speed of technology transfer, and changes that can occur due to information technology.

5) Legal
   This factor almost overlaps with the political factor. However, this factor emphasizes more specific laws. It is also necessary to know the potential changes in the law and their impact on the program in the future. Legal factors include legal aspects in which the company operates, such as monopoly laws, product safety, minimum wages, employment laws, health and safety, and intellectual property protection.

6) Environment
   This factor is related to the government's increased scarcity of raw materials, pollution targets, and carbon footprint targets. This includes ecological and environmental factors such as weather, climate, environmental balancing, and climate change, all of which can have a significant impact on industry.

PESTLE analysis is critical, especially when launching a new product or service, expanding into a new market, considering new market directions, or working as part of a strategic project team. PESTLE analysis stages according to Paul, (2014) is as follows:

1) To generate problem-solving ideas, brainstorm and list key issues beyond the organization's control.Identify broadly the meaning of each problem that exists
2) Sort the things that are relatively important to the organization
3) Estimating possible problems that will occur
4) Briefly consider the conclusions reached if the problem occurs

This research is considered suitable for using PESTLE analysis because it is able to provide a complete picture of various external factors at a macro level for the development of FinTech in Indonesia. Therefore,long-term trends and their implications can be drawn so that they can guide strategic decision making.

2.3 Financial Technology

Financial technology (FinTech) is the use of technology in providing solutions in the financial sector (Arner et al., 2017).FinTech is a phenomenon of combining technology with financial features that change business models and weaken the barrier to entry. FinTech is defined as the hybridization of technology in the process of traditional and technology-based financial services (Joyosumarto, 2018). The financial system under consideration is one that generates new products, services, technology, and/or business models, all of which can have an impact on monetary stability, financial system stability and/or efficiency, smoothness, security, and reliability of the payment system. (BI Regulation No. 19/ 12/PBI/2017).

Financial technology is an industry made up of businesses that use technology to improve the efficiency of the financial system and financial services. (World Bank, 2017). The Financial Services Authority uses the term Digital Financial Innovation to translate financial technology. Digital Financial Innovation is all forms of innovation that provide added value in financial services (Financial Services Authority Regulation No. 13/POJK.02/2018).

FinTech activities include cryptocurrency and digital money, peer-to-peer lending, smart contracts that execute contracts between buyers and sellers of information technology security, technology-based insurance, and technology-based regulations (Haddad & Hornuf, 2019; K. et al., 2018). FinTech in Indonesia has evolved following consumer needs, policies, and existing technology infrastructure. Currently it does not only cover digital payments (Bank Indonesia Regulation No. 18/40/PBI/2016) and online loans (Financial Services Authority Regulation No. 77/POJK.91/2016), but also includes Digital Financial Innovation (Service Authority Regulations) Finance No. 13/POJK.02/2018) such as investment management, insurance, and digital financial support, as well as crowdfunding services in the form of shares (Financial Services Authority Regulation No. 37/POJK.04/2018).

3. RESEARCH METHODS/METHODOLOGY

This research method utilizes a qualitative approach based on library research. Library research is a collection of activities involving library data collection methods, reading, recording, and processing research materials (Zed, 2014).

In detail, this research consists of three stages, namely:

1. Identifying the general description of the development of financial services and FinTech in Indonesia through library research. The library sources used include books, scientific journal articles, research reports, and other documents relevant to the topics studied in this research.
2. Conduct external environmental analysis using PESTLE analysis. Through PESTLE Analysis, political, economic, social, technological, environmental, and legal aspects are analyzed qualitatively to get a more comprehensive picture of factors that are out of control but have a strong impact on the development of FinTech in Indonesia.
3. Compile the implications of PESTLE's analysis on the development of FinTech in Indonesia. This implication data can be used as a reference for making more targeted strategies so that FinTech in Indonesia can develop both quantitatively and quantitatively.

4. RESULTS AND DISCUSSION

4.1 Overview of FinTech in Indonesia

The traditional banking industry is different from the FinTech industry. The difference lies in the driving aspect of the industry. The traditional banking industry is driven by the banking institutions themselves. The FinTech industry is driven by the needs of the industry's customers. FinTech develops to answer customer needs and adjust customer behavior trends (Bank Indonesia, 2019).

Fintech is one of the innovation phenomena that disrupts the global financial services industry. Disruption of innovation is a process in which small organizations as entrants are able to challenge established organizations that have existed before by offering new technologies, with the main segment being the neglected society (Paetz,

2014). Disruptive innovation offers advantages over existing industries, such as a simpler process, more fun, and more attractive to new people (Muliawaty, 2019). In simple terms, the disruption of innovation is a competitive response (Denning, 2016).

The FinTech category in Indonesia consists of(Bank Indonesia, 2016; Ilman et al., 2019; Marginingsih, 2019):

1. Loans, Financing and Capital Provision
   FinTech This brings together those who need funds with those who can provide funds. For example crowdfunding (Kitabisa, CrowdTivate, WeCare.id, and others), peer to peer lending (Uangteman, Borrow, Modalku, and others).
2. Market support or Market Provisioning
   This FinTech collects various types of information in the financial sector to be presented to its users, such as financial tips, financial investment information, credit cards, and others. This FinTech is expected to be a reference in making financial decisions for its users. Examples include E-Aggregators (Cekaja.com, Cermati, Easy Accounting, Compare88, and others).
3. Digital Payment System
   The scope of this category is in the form of Payment, Clearing, & Settlement. Startups in this category provide digital wallets that generally connect e-commerce businesses with various banks to facilitate transactions. For example, mobile payments or P2P transfers (Samsung Pay, Apple pay, etc.), Web-based payments (Kudo, Dompetku, KasPay, etc.), and digital currency (BitCoin).
4. Investment and Risk Management
   FinTech is used to carry out financial planning and monitor financial conditions. For example, robo advice (Stockbit.com), E-trading (Bareksa.com), and insurance (Rajapremi, Cekpremi, Asuransi88.com, and others).

The number of FinTech startups in Indonesia is the largest in ASEAN. This number continues to increase, especially in the last three years. Until 2020, there are at least 362 FinTech companies in Indonesia(Indonesian Fintech Association, 2020). However, in percentage terms, the number of FinTech startups in Singapore is the largest, at 39%, followed by Indonesia (20%), Malaysia (15%), and Thailand (10%).(UOB Bank, 2020).

4.2 PESTLE Analysis

The results and discussion of external factors that have an impact on the development of FinTech in Indonesia during the COVID-19 pandemic PESTLE analysis is used to analyze the growth, threats, and trends of various external factors that have an impact on the development of Fintech in Indonesia.

Political Factors:

One of the focuses of the World Economic Forum in recent years has been the achievement of an inclusive economy that aims to reduce inequality in society (World Economic Forum, 2018). Referring to The Inclusive Development Index (IDI) from the World Economic Forum and adjustments to conditions in Indonesia, Indonesia also measures the inclusive economy based on the Inclusive Economic Development Index. In 2017, the budget issued by the State Budget for infrastructure distribution was IDR 364.6 trillion. One of the implications for the development of FinTech in Indonesia from this strategy is to encourage equitable distribution of cellular telecommunications infrastructure in the regions. Adequate infrastructure can attract investors (Pratiwi & Triani, 2019; Sukwika, 2018).

Besides, since 2016Indonesia has also developed the National Strategy for Financial Inclusion as an effort to encourage economic growth, create financial system stability, support poverty reduction programs, and reduce disparities between individuals and between regions in creating community welfare. One of the priorities is to improve digital financial products and services and strengthen the integration of economic and

financial inclusion activities through at least digital financial services(Regulation of the President of the Republic of Indonesia Number 114 of 2020 concerning the National Strategy for Financial Inclusion, 2020). Financial Services Authority in the Financial Services Authority Regulation No. 13/POJK.02/2018 requires fintech operators to participate in increasing financial inclusion and literacy.

During the COVID-19 pandemic, the Indonesian government's efforts to stimulate economic activity were one of them through the stipulation of Perppu 1/2020 to carry out Income Tax Relaxation (Ministry of Finance, 2020). A total of Rp. 70.1 trillion was issued by the State Budget for the Elimination of Income Tax & Imported Goods Tax, simplification and acceleration of the export-import process, reduction of corporate taxes and acceleration of VAT refunds, OJK and Capital Market policy packages, relaxation of People's Business Credit (KUR) policies, and policies Bank Indonesia. This stimulus also has implications for FinTech, especially in the taxation of electronic transactions, both online retail, marketplace, online classifieds, price comparison platforms, and daily deals. reduction in corporate income tax rates (Fahrika & Roy, 2020).

Economic Factors:

Economic growth, exchange rates, inflation rates, interest rates, consumer income, and unemployment rates are all economic factors. This factor may have an immediate or indirect effect. This economic factor includes all the factors that affect the business climate of a company.

Volatility in the global financial sector is rising very high. This is influenced by increasing investor concerns about uncertainty due to COVID-19. Stock markets and exchange rates are affected by capital flight from developing countries. This has an impact on the decline in FinTech investors in Indonesia (Ministry of Finance, 2020).

The spread of COVID-19 caused the Indonesian economy to contract. Gross Domestic Product (GDP) in the first quarter of 2021 reached Rp 3,969.1 trillion. Compared to the previous year, the Indonesian economy experienced a growth contraction of 0.74% (yoy). Meanwhile, compared to the previous quarter, namely the fourth quarter of 2020, it experienced a growth contraction of 0.96% (qoq). Indonesia's GDP growth began to decline since Quarter I-2020 and was at its lowest point in Quarter II-2020 with a decline of 5.32%.

Several real sectors were also affected, such as the transportation, trade and tourism sectors. This causes FinTech that is developing in these sectors to be affected, such as a decrease in the number of users, a decrease in sales of several business models, difficulties in raising funds, and the need to postpone business expansion (Indonesian Fintech Association, 2020)

GDP growth by business sector (yoy) was driven by the agricultural sector by 2.95%. Meanwhile, other sectors such as mining and quarrying, manufacturing industry and trade have negative growth.In terms of production, the sectors thatexperienced the deepest decline of up to 13.12 percent was the Transportation and Warehousing Business Field. Meanwhile, in terms of expenditure, the Nonprofit Institutions Serving Household Consumption Expenditure Component (PK-LNPRT) was the component with the deepest decline of 4.53 percent. (Central Bureau of Statistics, 2021). This is reflected in data on online loan disbursement, which increased from January to June 2020. The total disbursement for these 6 months was Rp.113.46 trillion, whereas in January to December 2019 it was Rp. 81.5 trillion. This is because the number of borrowers has also increased. During January to December 2019 there were 18.5 million borrowers, while January to June 2020 there were 25.7 million borrowers (Financial Services Authority, 2019).

Social Factors:

The total population of Indonesia in 2020 is 270.20 million people, dominated by the productive age population (15-64 years) of 70.72%. This number is projected to grow

to more than 298 million people in 2030 with an estimated percentage of the productive age of 68.1% (Central Bureau of Statistics, 2021).

Since 2006, the percentage of poverty in Indonesia has tended to decrease from year to year. It was noted that in 2006 it was at 17.75% and in 2018 it was at 9.82%. Based on the poverty classification between urban and rural poverty, the decline in urban areas over the last five years decreased by 1.37% from 8.39% to 7.26%. This percentage is equivalent to 3.62 million people. Meanwhile, the reduction in poverty in villages was only 0.97% or equivalent to 2.56 million people (BPS, 2018). This data indicates that poverty alleviation in the village has not run optimally.

In 2020, the number of unemployment and poverty will also increase. The open unemployment rate increased to 7.33% in 2020 from 5.28% in 2019 and the poverty rate increased to 9.9% in 2020 from 9.41% in 2019. The poverty rate also increased from 24, 79 million in September 2017 and increased to 26.42 million in March 2020 (Ministry of Finance, 2020). The following is a graph of the unemployment and poverty rates from 2014 to 2020.

Figure 3. Development of Unemployment and Poverty Rates in Indonesia 2014 to 2019
Source: BPS (2020)

A part from increasing unemployment and poverty during the pandemic, people's literacy levels are also low, especially financial literacy. According to the Financial Services Authority (2019), the financial literacy index in 2019 was only 38.03 percent. Financial literacy, on the other hand, plays a significant role in increasing consumers' and the general public's knowledge, confidence, and skills in order for them to better manage their finances (Financial Services Authority, 2017). Financial literacy also spurs individuals to have financial plans in the future that are in accordance with the patterns and lifestyles they live (Yushita, 2017). Moreover, 54% of FinTech users are people with income below 15 million/month or middle to lower income (Indonesian Fintech Association, 2020). Low levels of financial literacy and lack of financial literacy can make people trapped in various illegal financial services (Yushita, 2017), especially FinTech services. Nonetheless, FinTech has played an important role in bridging wider access to finance, particularly for people who have been unbanked or underbanked. According to the segmentation of FinTech customers in Indonesia, 41 percent of them are unbanked (Cambridge Center for Alternative Finance, 2019).

The COVID-19 pandemic has also gradually changed people's lifestyles, where many sectors are currently switching from offline to online. Even “Stay at Home Economy” will become an economic trend in the future. This also provides good news as well as an opportunity that can be used by people affected by the pandemic (Ardianti et al., 2020). This can be an opportunity for FinTech startups to increase their users again.

Technological Factors:

The Indonesian government will allocate a budget of IDR 29.6 trillion for information and communication technology in the 2021 State Budget (Ministry of Finance, 2020). This budget is expected to support inclusiveness and digital transformation to villages, especially internet network coverage. 4G internet network coverage has reached 97.59% of settlements throughout Indonesia (Bappenas, 2019).

Government support for technological advancements and national digital businesses is also reflected through the National Movement for 1,000 Digital Startups since July 2016. This movement is carried out by the Ministry of Communications and Information by providing guidance for 6 months, providing material debriefing through online and offline classes, accommodating various levels of startups. , connecting startups with mentors and industry, as well as providing free access to coworking spaces (Paramadita et al., 2020).

In 2019, as many as 45% of 400 million active mobile phone users use smartphones with smartphones. A total of 175.4 million of them are internet users and 160 million people are active social media users (APJII, 2019). The COVID-19 pandemic affects consumer behavior, especially in Indonesia, as it forces people to start switching from manual transactions to digital transactions. Throughout 2020, internet users grew by 40%(Wahyudi, 2020)and e-commerce transactions increased by up to 400% per month (OJK, 2020). It didn't take long for cashless payments and digital wallets to become part of people's daily lives.

There are two main implications of the development of FinTech. First, the changing business model, where financial services are carried out with different concepts and models from before. Second, the reduced barriers to entry into business with the emergence of unregulated financial service actors and providers who can provide financial services as regulated actors do (Ministry of Finance, 2020).

The advancement of information technology has also resulted in the creation of a virtual community that allows users with similar interests to gather and exchange ideas and information without having to meet in person. The virtual community can be developed into a place to conduct electronic transactions that lead to new business opportunities for the environment or individuals, thereby greatly contributing to the Indonesian economy and, as a result, increasing financial inclusion (Zulfah, 2018).

Legal Factors:

One of the risks associated with the FinTech industry is the possibility of funds being lost or consumer data being misused. Furthermore, there is the possibility of abuse for money laundering and terrorism financing (Hadad, 2017). The principle of consumer protection that is considered the most important according toIndonesian Fintech Association (2020)are data privacy and security, transparency, and fair treatment where what is still very important is data privacy and security. FinTech development in Indonesia has been supported by several legal aspects issued by several regulators, especially regarding licensing, regulation, and supervision of FinTech implementation. Some of the regulations that have been issued related to FinTech are as follows.

Table 1
FinTech-Related Regulations

No.	Regulation	Destination
A	**Regulations Issued by BI**	
1	PBI No. 18/40/PBI/2016 Year 2016 concerning the Implementation of Payment Transaction Processing	Regulate the processing of payment transactions and supporting operations by payment system service providers.
	PBI No. 19/12/PBI/2017 concerning the Implementation of Financial Technology	Regulate financial technology implementation to encourage financial sector innovation by applying consumer protection, risk management, and prudence principles in order to maintain financial system stability and a smooth, efficient, reliable, and secure payment system. Financial technology providers are classified into five categories: (1) payment systems, (2) market support, (3) investment and risk management, (4) loans, financing, and capital provision, and (5) other financial services.

	PBI No. 20/6/PBI/2018 Year 2018 concerning Electronic Money	Regulates licensing, approval, administration, protection, and supervision of electronic money issuance.
	Regulation of Members of the Board of Governors No. 21/18/PADG/2019 concerning Implementation of the Quick Response Code National Standard for Payments	Develop payment transaction schemes with Quick Response Code and regulate the usual processing.
	PBI No. 22/PBI/2020 concerning Payment System which will take effect on July 1, 2021.	Reorganizing the payment system industry's structure and providing a framework for overall payment system implementation in line with the advancement of the digital economy and finance.
	Indonesian Payment System Blueprint (BSPI) 2025	Realizing the five visions of BSPI 2025 and ensuring the flow of digitalization develops in a conducive digital economic and financial ecosystem.
B	**Regulations Issued by OJK**	
1	POJK No. 77/POJK.01/2016 concerning Information Technology-Based Lending and Borrowing Services	As an effort to control the space for lending and borrowing service providers and provide protection to consumers.
2	POJK No. 13/POJK.02/2018 concerning Digital Financial Innovation in the Financial Services Sector	The purpose of this regulation is to regulate the mechanism for recording, registering, monitoring, and supervising fintech; the establishment of a fintech ecosystem and the development of an innovation culture; the operator's obligation to protect consumer data, effective risk management for companies, the implementation of basic consumer principles, the application of the principle of transparency, and the implementation of the principle of accountability.
3	Financial Services Authority Circular Letter No. 20/SEOJK.02/2019 concerning the Registration Mechanism of Digital Financial Innovation Operators	Require all providers of Digital Financial Innovation (IKD) to register and obtain permission from the Financial Services Authority. This is a form of state protection for IKD organizers and the user community.
4	Financial Services Authority Circular Letter No. 21/SEOJK.02/2019 regarding Regulatory Sandbox	Ensure that all Digital Financial Innovations meet the Financial Services Authority's criteria by conducting tests on the trustworthiness of business processes, business models, financial instruments, and Digital Financial Innovation organizers' governance.
5	Financial Services Authority Circular Letter No. 22/SEOJK.02/2019 concerning the Appointment of the Association for Digital Financial Innovation Providers	Appointment of the Digital Financial Innovation Organizer Association as a legal entity comprised of Digital Financial Innovation organizers.
6	Digital financial Innovation Roadmap and Action Plan 2020-2024	Explain the role of OJK as an accelerator, facilitator, and incubator of FinTech related to policy and regulatory frameworks, regulatory sandbox, capacity building, facilitation, and collaboration.
7	POJK No. 57/POJK.04/2020 concerning Securities Offering through Information Technology-Based Crowdfunding Services	Crowdfunding service activities, which are financial services activities in the capital market sector, are regulated.
8	Digital Financial Literacy Roadmap Program 2020-2024	Contains digital actions covering aspects of regulation, research, accelerators and supervision, collaboration, research, and customer protection.

C	**Other Regulations that Support FinTech Development in Indonesia**	
1	Minister of Finance Regulation No. 202/PMK.05/2018 concerning the Electronic State Revenue System	Regulating the electronic state revenue system. This regulation is the second amendment to the previous regulations in 2014 and 2017.
2	Presidential Regulation No. 63 of 2017 concerning the Distribution of Non-Cash Social Assistance	Regulating the transfer of non-cash social assistance in the form of money from State-Owned Commercial Banks to accounts in the names of Social Assistance Recipients.
3	Government Regulation No. 71 of 2019 concerning the Implementation of Electronic Systems and Transactions	Regulating the use of information technology in electronic transactions that include provisions on new concepts for public and private electronic system operators; new data localization requirements; cancellation of electronic data; electronic certificate and electronic reliability certificate; and new scope for electronic certification services.
4	Ministry of Home Affairs Regulation No. 102 of 2019 concerning Granting of Access Rights and Utilization of Population Data	Discuss requirements and procedures for granting access rights, utilization of population data, as well as monitoring, supervision, and sanctions.
5	Presidential Regulation No. 114 of 2020 concerning the National Strategy for Financial Inclusion	This strategy was conceived as an effort to increase financial equity in Indonesia, including one supported by the development of FinTech.

Source: BI, OJK, and Government Regulations Processed by the Author (2021)

The data above shows that FinTech in Indonesia is supported by legal forces. However, the implementation must continue to be monitored, especially in order to avoid misuse of user data and funds and avoid illegal FinTech.

Environmental Factors:

The mobility of people, goods and economic activities is not greatly affected by weather conditions in the tropics. Indonesia is also rich in natural resources both from land and water. There are so many natural and marine products that can be processed, traded, consumed and distributed throughout Indonesia or throughout the world so that it will generate very high business revenue. Even 98% of economic growth in the Laskar Laut fishing business group is influenced by the availability of marine resources (Oki et al., 2020). The form of the FinTech product strategy must be adapted to the characteristics of people in small towns and rural areas who are mostly engaged in the agricultural sector, limited digital literacy, strong social capital, and require short-term financing and a relatively small amount of capital.

One of the government's efforts to improve infrastructure in the midst of Indonesia's geographical conditions, which consists of tens of thousands of islands, is the Palapa Ring project. This infrastructure project involves the construction of a national fiber optic network that connects Sumatra, Java, Kalimantan, Nusa Tenggara, Papua, Sulawesi, and Maluku regions and reaches 440 districts / cities across Indonesia (Ministry of Communication and Information Technology, 2013).

FinTech users themselves are still uneven and dominated by people who live in Greater Jakarta (41%), Bandung (13%), Surabaya (12%), and Medan (8%) (Indonesian Fintech Association, 2020). One of them is caused by the gap in technological infrastructure and the internet connection network that is less supportive (Marginingsih, 2019). This network is expected to serve as the foundation for all telecommunications operators and users in Indonesia.

CONCLUSION

Financial technology is one of the most effective solutions in the financial industry. The combination of technological and financial features results in a new business model that is easily accessible to the public, allowing people's needs to be met quickly.

Previous research shows that the number of FinTech startups in Indonesia is the largest in ASEAN. Until 2020, there are at least 362 FinTech companies in Indonesia (Indonesian Fintech Association, 2020), while throughout 2019 the total Fintech in Indonesia was 276, meaning there was an increase of 31%. Seeing the very high increase in FinTech in Indonesia is also supported by the political sector by issuing tax incentives, which will definitely have a positive impact on the development of FinTech.

The COVID-19 pandemic resulted in a contraction of Indonesia's economic growth, compared to 2020, which experienced a contraction of 0.74% (yoy). This is due to investors' concerns about uncertainty due to COVID-19. The stock market and exchange rates are affected by the capital fight from developing countries and has an impact on the decline in Fintech investors. Several economic sectors such as trade, transportation, warehousing, tourism, mining, processing industry also experienced a decline. So that the increase in FinTech which has reached 31% is feared to decrease.

Indonesia with a population of 270.20 million people is the fourth largest in the world with a productive age of 70.72%, which is a great potential for FinTech growth, although several obstacles still stand in the way, such as the poverty rate which is still at 9.9% and open unemployment at 7.33. %. The number of poverty and unemployment has increased dramatically due to the COVID-19 pandemic. Public literacy, especially financial literacy, which was still 38.03% in 2019 was also disrupted by the COVID-19 pandemic. However, with a potential population that is estimated to reach 290 million in 2030, it is certainly a very large economic market and is supported by political policies to increase economic growth, it is hoped that the Indonesian FinTech sector will continue to grow.

Technology infrastructure in Indonesia is being developed as widely as possible throughout the country. The 4G network has covered 97.59% of settlements throughout Indonesia. Smartphone users in Indonesia have reached 45% of the total 400 million HP users and e-commerce transactions have also increased very significantly up to 400% per month. With all the limitations of human movement during the COVID-19 pandemic, the technology sector is good enough to handle the needs of FinTech transactions.

The Indonesian government through the appointed authority has and continues to provide protection for FinTech so that the risk that occurs is expected to be minimal. Several laws and regulations have been issued and continue to be developed and updated related to Fintech.

Indonesia is a country with thousands of islands and is located in the tropics and is greatly benefited by the abundance of natural resources that can be processed and traded to meet the needs of people's lives and generate very high business revenue.

Thus, FinTech in Indonesia should develop very significantly with the various positive things in the PESTLE sector mentioned above. Some things that really need to be improved are in the sector of understanding financial literacy. From the political and legal sectors, it is sufficient to provide a legal umbrella and FinTech protection. Meanwhile, in the social, technology and environmental sectors, there is also a lot of potential for FinTech growth. The economic sector still needs to be improved, one of which is by increasing financial literacy so that people understand and enjoy doing FinTech economic activities.

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