

The Effect of Regulatory Sandbox on The Behavior of FinTech Actors in Indonesia Using Theory of Planned Behavior Approach

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Abstract. The growth of FinTech has become a new phenomenon in Indonesia. Though, Indonesia's Government has implemented regulation to facilitate the development of digital financial innovations known as Regulatory Sandbox. Still, the ratio of legal FinTech is very small compared to illegal FinTech. This research using quantitative methods by building 8 hypotheses through the Theory of Planned Behavior approach. The primary data is based on 107 respondent's, resulted 6 hypotheses have a positive effect while 2 hypotheses have no effect. The findings indicate that one of the reasons why illegal FinTech is greater than legal FinTech is due to lack of interest from FinTech Actors whereas the factor that reduces this interest is the low influence of the authorities and stakeholders in making the Regulatory Sandbox a top priority. This research provides benefits for all stakeholders to make the necessary improvements to increase interest in participating in the Regulatory Sandbox.

Keywords: Financial Technology, Regulatory Sandbox, Theory of Planned Behavior, Indonesia

1. Introduction

Financial Technology, also known as FinTech, is growing so rapidly nowadays. Innovation, which is the result of technological development is utilized for facilitating economic activity. FinTech is a contributor to innovation in the industry and financial sector, driven by factors of economic sharing, regulatory aspects and aspects information Technology [1].

To support the development of FinTech, Regulators apply regulations and standardization for FinTech to obtain registered and licensed status, through the Regulatory Sandbox mechanism that regulated by Central Bank (PBI) No.19/12/PBI/2017 and Financial Services Authority (POJK) No.13/PJOK.02/2018 [2][3].

Central Bank of Indonesia (BI) reported that economic transactions through e-commerce grew significantly, reaching 162% from 2017 to 2019. Likewise, online payments via electronic money from FinTech have gone beyond transactions from traditional banks [4].

If we take a look on number of FinTech in Indonesia, for the first quarter of 2020 as reported by The Financial Services Authority (OJK), there were 161 registered FinTech entities, with an asset value of IDR 3.38 trillion and a loan value of IDR 95.4 trillion as disbursed loans, this figure increased by 17.05% or IDR 81.5 trillion over the previous period. On the other side, OJK which is incorporated with the Investment Alert Task Force has terminated 2,002 illegal

and unregistered P2P Lending FinTech Entities, 485 Illegal Investment Entities and 93 Unlicensed Pawn Businesses. It is estimated that the total loss to society due to fraudulent investment fraud has reached IDR 92 trillion over the past 10 years [5].

Though, Indonesia's Government has implemented regulation to facilitate financial development along with digital innovations, which is known as Regulatory Sandbox. Still, the ratio of licensed and registered FinTech is still very small compared to illegal FinTech.

The benefits and contribution of this research are as follows: First, FinTech players will obtain insights how important to follow Regulatory Sandbox so that the intention to participate in the Regulatory Sandbox increases. Second, The FinTech industry will continue to grow healthily and safely with an increase in the number of registered and licensed FinTech. Third, The Public as FinTech consumer have better understanding and knowledge how to choose safe FinTech. Fourth, The government, through the Authority Bodies, will get insights in developing strategies for financial literacy and inclusion as well as to make continuous improvements and adjustments to regulations for the development to have a more competitive FinTech. Fifth, Academics will be stimulated to carry out research development related to the FinTech ecosystem, especially in its regulatory and novel aspects.

2. Literature Review

The Sandbox framework was first designed by the U.S. Consumer Financial Protection Bureau (CFPB) in 2012 through a project called Project Catalyst (CFPB 2016). Meanwhile, the term of Regulatory Sandbox was first introduced by U.K. Financial Conduct Authority (FCA) in 2015 and spread throughout the world to more than 20 countries [6].

The benefits of adopting the Regulatory Sandbox have a very positive effect on investment growth and play an important role in increasing the inflow of capital into the FinTech business ecosystem by eliminating regulatory uncertainty [7].

The government supervises FinTech to regulate its implementation in encouraging all forms of innovation by applying the principle of protection for consumers through the implementation of risk management in order to maintain effective and reliable monetary stability and financial system stability [8]. The Regulatory Sandbox mechanism details for Payment System regulated by a Regulation of Members of the Board of Governors (PADG) No. 19/15/PADG/2017, while regarding the execution process regulated by PADG No. 19/14/PADG/2017 [9][10]. For Digital Financial Innovation, the guidelines of Regulatory Sandbox mechanism regulated by Circular Letter of Financial Services Authority (SEOJK) No. 21/SEOJK.02/2019, while for registering the Digital Financial Innovation regulated through SEOJK No. 20/SEOJK.02/2019 [11][12].

This research was developed using Theory of Planned Behavior (TPB). TPB is an extension of Theory of Reason Action (TRA) which was introduced earlier by Fishbein and Ajzen which aims to know and understand individual behavior in making decisions [13]. TRA states that a person's behavior is based on Intention, while intention is influenced by 2 factors, namely Attitude and Subjective Norms. Intention indicates how much someone has the desire to try or do it as a form of behavior. Meanwhile, Subjective Norms relate to social pressure or views on someone who is felt to take action or not [14].

The development of TRA into TPB was continued by Ajzen by adding Perceived Behavioral Control as a factor that also influenced Intention and Behavior. Ajzen explained that Attitude toward the Behavior, Subjective Norms and Perceived Behavioral Control can be influenced by Beliefs [15]. The concept of TPB can be seen in **Figure 1**.

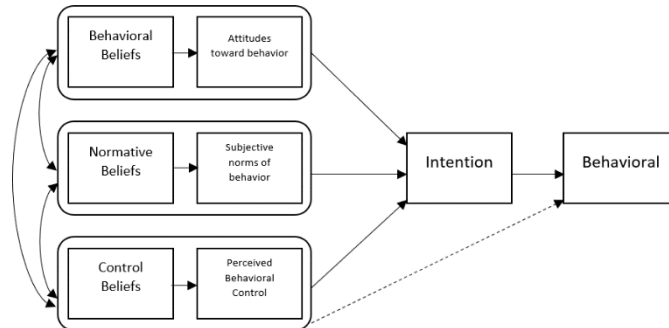


Fig. 1. Theory of Planned Behavior by Ajzen [15]

According to previous research using TPB, Attitude and Subjective Norms as factors influencing Intention has a positive effect on Intention [16]. While Perceived Behavioral Control also has a positive effect on the Intention [17].

Based on the TPB and supported by several previous studies [18], a conceptual framework for the behavior of FinTech actors towards the Regulatory Sandbox is formulated into variable and hypothesis constructs. There are 8 hypotheses built through this research as follows:

Hypothesis 1. Behavioral Beliefs regarding the Regulatory Sandbox have a positive effect on the Attitudes of FinTech Actors.

Hypothesis 2. Normative Beliefs regarding the Regulatory Sandbox have a positive effect on the Subjective Norms of FinTech Actors.

Hypothesis 3. Control Beliefs regarding the Regulatory Sandbox have a positive effect on the Perceived Behavioral Control of FinTech Actors.

Hypothesis 4. Attitude has a positive effect on the Intention of FinTech Actors towards the Regulatory Sandbox.

Hypothesis 5. Subjective Norms have a positive effect on the Intention of FinTech Actors towards the Regulatory Sandbox.

Hypothesis 6. Perceived Behavioral Control has a positive effect on the Intention of FinTech Actors towards the Regulatory Sandbox.

Hypothesis 7. Perceived Behavioral Control has a positive effect on the Behavior of FinTech Actors towards the Regulatory Sandbox.

Hypothesis 8. Intention has a positive effect on the Behavior of FinTech Actors towards the Regulatory Sandbox.

3. Methodology and Data Analysis

The research method that used in this research is a quantitative approach. The quantitative approach is used by using numerical data which is then analyzed to gain deeper understanding and knowledge [19]. While processing and analyzing data using Structural Equation Modeling (SEM) through the Partial Least Squares (PLS) approach to predict the most influential variables, which are important to provide managerial implications [20].

The primary data in this research taken from respondent's answer on questionnaires, who were collected as research samples from FinTech practitioners, namely people who are involved in FinTech and have knowledge about regulations especially related to the implementation of the Regulatory Sandbox in Indonesia. While the sampling technique uses non-probability sampling techniques, supported through purposive sampling method [21].

The number of valid samples that meet the questionnaire screening requirements in this research are 107 respondents as research samples to be processed and analyzed. The number of samples has exceeded the minimum standard and is included in the medium size category [20][22].

Based on the TPB concept that underlies this research, the construct of the concept into a measurable variable is carried out through the operationalization of the variable [23]. Through this research, there are 8 latent variables and 27 indicators as the operationalization of the variables.

For measurements on these variables is using a Likert scale with five-point value. Likert scale is used to measure attitudes, opinions and perceptions of people about the phenomenon that occurs [21] [24].

Based on 107 respondent's answer on questionnaires. Data, then was processed for validity and reliability test using Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) approach using SmartPLS application.

Validity test is performed to show the validity of a test and to make sure that test can provide an overview of the initial goal to be measured [25]. In this research, the validity test was conducted based on Convergent Validity and Discriminant Validity. Convergent validity refer to Outer Loading and Average Variance Extracted (AVE) [26]. Standard outer loading value is 0.70 or higher as mentioned by Chin [27]. Whereas the AVE value is above 0.5 [28].

For Discriminant Validity, conducted to make sure there is no overlap within constructs and there is no tendency to measure the same thing, a construct must be unique and can capture specific phenomena [26]. Measuring discriminant validity in this research is based on the Cross Loading factor with value should be above 0.60 and The Fornell-Lacker Criterion value is expected to be above 0.70 [27]. The results of the validity test show that all measurement parameters are valid.

Reliability test is performed to measure the questionnaire, it is said to have a reliable or reliable value if the respondent's answer is stable and consistent [29]. The Reliability test used in this research is based on Composite Reliability with value should above 0.70 [27] and Cronbach's alpha value, the general threshold value is 0.70 and can be reduced to 0.60 in exploratory research [20]. Reliability test results show that all measurement parameters are reliable.

For inner model analysis, it is also called structural model analysis. The R-Square value of each endogenous variable is above the value of 0.33 indicating the coefficient of determination has an indication that the model is moderate in terms of exogenous variables explaining endogenous latent variables, while for Behavior variable has value 0,53 shows that the factors that influence the Behavior have contributed as much as 53%, meaning that there are other factors as much as 47% that contribute to the Behavior. This is useful for research development to add other potential variables to increase the accuracy of research.

For the significance test through the t-value statistics, direct effect between variables in general has a t-value above 1.96 which are H1 (11.048), H3 (10.712), H2 (9.502), H8 (4.334), H4 (3.738), H6 (2.018). However, there are 2 conditions with insignificant t-value, which are H7 (1.484) and H5 (1.702).

4. Research Result and Discussion

Based on the structural analysis inner model on the significance test of the t-value and p-value, the results of the research hypothesis can be seen in the **Table 1** below.

Table 1. Hypothesis Result

Hypothesis	Path	t-value	p-value	Result
H1	Behavioral Beliefs → Attitude	11,048	0,000	Accepted
H2	Normative Beliefs → Subjective Norms	9,502	0,000	Accepted
H3	Control Beliefs → Perceived Behavioral Control	10,712	0,000	Accepted
H4	Attitude → Intention	3,738	0,000	Accepted
H5	Subjective Norms → Intention	1,702	0,089	Rejected
H6	Perceived Behavioral Control → Intention	2,018	0,044	Accepted
H7	Perceived Behavioral Control → Behavior	1,484	0,139	Rejected
H8	Intention → Behavior	4,334	0,000	Accepted

Regulatory Sandbox is believed by FinTech actors have a big role in the development of the FinTech industry in Indonesia, this is indicated by the hypothesis of all aspect related to Beliefs (H1, H2 and H3) have a positive effect.

Support from related parties who have an influence on FinTech actors is considered not to have contributed to the interests or intentions of FinTech actors to follow the Regulatory Sandbox. This is indicated by the hypothesis H5, the results have no effect (rejected), this shows that the Regulatory Sandbox has not become a strong concern as a norm that triggers FinTech actors to follow Regulatory Sandbox.

FinTech actors have an intention to do the Regulatory Sandbox is more influenced by the encouragement of Attitudes considering the gains or losses that are obtained from following the Regulatory Sandbox (H4) and the encouragement of Perceived Behavioral Control related to anything that is deemed to make it easier or difficult to do the Regulatory Sandbox (H6), both are received as having a positive effect. However, this Perceived Behavioral Control does not affect FinTech actors to actually follow the Regulatory Sandbox, this is indicated by the hypothesis H7 the results have no effect (rejected).

The behavior of FinTech actors in following the Regulatory Sandbox is more triggered by the interest of the FinTech actors themselves, shown by hypothesis H8, the results are accepted and have a positive effect. This indicates that the phenomenon of low registered FinTech is due to the lack of interest of FinTech actors to follow the Regulatory Sandbox while one of the factor that reduces this interest has shown on the result of hypothesis H5 above.

5. Implication and Suggestion for Future Research

This research provides benefits for all stakeholders to make necessary improvements for better FinTech climate for the advancement of the digital economy in Indonesia. The following are some suggestions for the development of the FinTech industry in Indonesia and for research development in the future.

More efforts are needed to increase the motivation of influential parties, both the authorities and stakeholders in making the Regulatory Sandbox a priority for FinTech actors so that

understanding and interest in the behavior of FinTech actors towards the Regulatory Sandbox can be increased, several ways that can be considered, including: First, the effective collaboration of each FinTech stakeholder, both by regulators, FinTech actors and various communication media in improving socialization and financial literacy on an ongoing basis. Second, to increase law enforcement in providing a deterrent effect for illegal FinTech that make false investments and harm the public by regulating types of punishment or treatment that are more tangible and have an impact on FinTech owner So that illegal FinTech will not come and go many times but prefer to take care of licensing legally. Third, to increase awareness of the public in campaigning the only legal FinTech that has licensed by regulator which can guarantee the security of financial transactions. Fourth, the FinTech Association should open more access and reaches more widely to all FinTech actors, whether for established FinTech or new startup, even for Small Micro Medium Enterprises or individuals who are still unfamiliar with licensing and rules of the game but have high enthusiasm for FinTech.

To complement the limitations of this research and the development of future research, the following points can be considered: First, to add other independent variables or other relevant mediating variables to increase the value of the research model construction. Second, Increasing the number of respondents on a larger scale will increase the accuracy of the research. Third, combining the theory with other relevant theoretical approaches such as acceptance theories in adopting the Regulatory Sandbox or any other theory. Fourth, combining quantitative research methods with adding qualitative methods to improve research accuracy. Fifth, based on the statistical analysis on the structural model, the results of the indirect effect significance test for several paths have a significant value, this can be the subject of research to build other hypotheses.

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