FACTORS INFLUENCING THE TRANSITION OF TRANSACTION ACTIVITIES FROM CONVENTIONAL TO FINANCIAL TECHNOLOGY

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Abstract. Financial technology as a service innovation in the financial industry has become a means of transaction in the rapidly growing buying and selling transactions. Besides, it has become one of the alternative means of payment for consumers. This opportunity can be used as a business development opportunity for financial services for financial business providers. Changes in the transition from conventional payments to payments using financial technology services are influenced by various factors that support changes in transaction activities. This study aims to determine the factors influencing payment transaction activities, from conventional payments to payments using financial technology services. The research methodology involves various variables involved in it by using the factor analysis approach to determine factors that support the achievement of research objectives. It is supported by a sample of 100 respondents with various representative sample criteria to explain each factor involved in the research. The research results show that the transition of payment transaction activities from conventional methods to payment transactions with financial technology services is influenced by various variables. The variables included are information system flexibility, ideal, and value for use, ability, comfort, safety, interaction, activity, and length of transaction time..

Keywords: multivariate analysis; factor analysis; financial technology; conventional payment

I. INTRODUCTION

The financial services industry has experienced significant changes when supported by the use of information technology, so the use of information technology in the financial services industry has helped facilitate transactions for consumers [1] and increase customer satisfaction [2]. Increasing satisfaction through information technology has changed the form of transactions from conventional transactions to information technology-based transactions, known as Financial Technology (FinTech) [3]. FinTech provides various advantages in technology-based transaction services, such as service coverage in certain areas where automatic machine service facilities are unavailable [4]. The time is needed effectively to create a breakthrough to improve the service performance of the existing financial services industry [5]. FinTech ultimately brings various benefits that can be felt by using these financial services to support various financial transactions that are fast, easy, safe, comfortable, and efficient. Electronic payment methods, especially smartphone payments, significantly improve payment efficiency compared to conventional payment methods. FinTech is done online, so it takes little time and can reduce transaction costs. FinTech services allow consumers, sellers, and related parties to obtain information and conduct payment activities quickly and easily, without time and place restrictions. FinTech services are usually used for telecom top-ups, utility bill payments, and remittance services. Measuring the achievement of a goal or the success of an information system is very important to understand the value and progress of management and the information system

investment itself. The use of information systems in the financial sector can be found in business transactions so that information technology systems and business processes can be carried out easily, quickly, effectively, and efficiently.

The utilization of FinTech services has continuously increased according to the needs of transaction activities carried out by its consumers because the existence of FinTech has helped consumer transactions [6] and made it easier for users to be able to make transactions. The orientation of existing FinTech service needs is more focused on technology services supported by various advantages of the services provided [7] to increase the transaction needs that users need. In addition to service needs supported by technology, these service users have different background needs, including business needs and personal interests, especially when buying and selling transactions. The ease of transactions using information technology provides opportunities for financial service providers to develop their business because the innovations that occur in the banking world through the FinTech phenomenon are not a nuisance but an opportunity to develop FinTech services and improve banking financial performance [8]. The use of financial services through FinTech must be distinct from the role of the internet in conducting transactions. Currently, the number of internet users in Indonesia from 2021 to 2022, according to the Indonesian Internet Providers Association (APJII) Report 2022, has reached 210 million users with various usage interests. The various reasons people use the internet include online transactions (79.00 percent) and financial services (72.32 percent). Financial service providers can utilize this

opportunity to encourage transactions through internet services that start from conventional transactions to information technology-based transactions. The use of internet services is also utilized by using mobile phones or tablets 89.03 percent, while 0.73 percent use computers or laptops, and the remaining 10.24 percent use both (mobile phones and computers/laptops). Using internet services is an opportunity to improve the performance of financial services through the help of information technology at this time. The existence of mobile devices and the development of wireless technology in people's lives has caused FinTech to overgrow. Bank Indonesia has supported using mobile devices as a means of payment since 2009. Bank Indonesia encouraged the transition to non-cash transactions by launching the National Non-Cash Movement (GNTNT) on August 14, 2014. FinTech companies in the payment gateway category seek to provide integrated payment solutions through various delivery channels and facilitate cross-bank or multi-merchant transactions. *Digital payment* can be defined as the use of electronic devices as a means for consumers to purchase goods or services via the internet. The payment mechanism does not use physical money (not in cash) but through other media that have a value equivalent to the use of cash. Such conditions provide a platform for developing technology-based financial services supported by the share of credit to GDP is 34.77%. This one reflects the enormous market potential that FinTech can achieve without eroding the banking market share. Furthermore, the large unbanked population combined with the acceleration of middle-class income indicates the high market potential and relatively low distribution of physical banking infrastructure in Indonesia.

In supporting the shift from conventional transactions to information technology-based transactions, various efforts are needed to improve its services so that the existence of this information technology-based financial service can satisfy all users of this service towards FinTech service satisfaction. In improving FinTech services, many corrective actions have been taken. It primarily focuses on understanding the desires of consumers who use these services. It includes identifying the supporting factors for switching using the Model of Buyer Behavior and the Delone & McLean method **[9]**. It explains that information and service quality are positive and significant predictors of user satisfaction **[10]**. However, it needs to provide essential things for its users optimally. Furthermore, using the Technology Acceptance Model, it is stated that FinTech usability significantly influences consumers to use online product recommendation services **[11].**

Based on several sources, FinTech is believed to provide assurance of the transaction process, facilitate the transaction process, minimize the risk of loss, and encourage the use of mobile banking. However, various things need to be revealed regarding the problems faced in efforts to improve FinTech services' performance. So, efforts are needed to identify factors that encourage the transition from conventional transactions to information technology-based transactions as a non-cash payment instrument is widely used by the public.

II. RESEARCH METHODS

This research uses a Quantitative Method approach that utilizes Factor Analysis to identify factors that influence the shift from conventional transactions to information technology-based transactions. The data method used in this research is the survey method with questionnaire distribution techniques. Data collection in this study is obtained directly from the source by submitting statements to respondents. Sampling is based on current phenomena, and before the existence of FinTech, consumers tended to make payments traditionally by giving cash directly. Currently, there is a traditional consumer movement towards FinTech because consumers consider it more effective and efficient in making transactions. The stages of research implementation are described in Figure 1.
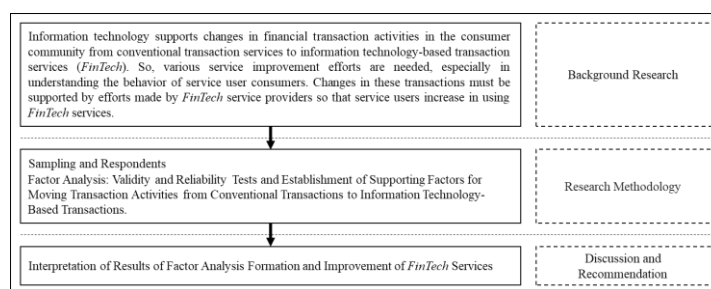

Figure 1. Research Stages

Sample and Respondent Determination

The data source for quantitative analysis is obtained from distributing questionnaires in the form of a Likert scale. Samples and respondents were determined using 100 respondents who came from various characteristics, namely:

1. Gender
   Based on the results of distributing questionnaires, it can be concluded that most FinTech users in Garut Regency are male respondents, as many as 55 people with a percentage of 55%, while female respondents are 45 with a percentage of 45%.
2. User's Age
   The results of data recapitulation show that FinTech user respondents are dominated by young people aged 21-30 years with a percentage frequency of 84%, respondents aged <20 years have a percentage frequency of 12%, ages 31-40 years have a percentage frequency of 1% and 41-50 years is 3%. Based on the age distribution, FinTech services are more widely used by the younger age group.
3. Job
   Users of FinTech services are dominated mainly students.
4. Transaction Frequency
   The frequency of FinTech services is dominated by consumers with more than five shopping experiences in one year, 53 percent.

Determination of Research Variables

The variables developed are based on various references related to the development of financial services, while the variables developed are related to:

1. Technology
   Technology is a combination of skills, knowledge, equipment, machines, and computers used to design, produce, and distribute goods and services **[12]** as well as a form of process that increases added value both in the form of products and in the form of services.

2. Perceived Behavior Control
   Perceived Behavior Control is an individual's assumption of his ability to perform a behavior in a condition. *Perceived behavior control* is linked to self-efficacy **[13]**. Self-efficacy assesses how well an individual carries out or executes an action required for a particular condition. Furthermore, model development uses the Model of Buyer Behavior approach **[14],** which shows a process and variables that influence consumer behavior.

Data Processing Stages

a. Data Validity Test

This validity test is carried out to measure whether the data obtained after the research is valid data or not, using the measuring instrument used (questionnaire).

b. Data Reliability Test

Reliability refers to the fixity or persistence of the tool in assessing what is desired, meaning that the tool's ability to be used will provide relatively the same results.

c. Factor Analysis

Calculations at the factor formation stage using SPPs Version 23. The stages are explained as follows:

1. KMO Test (*Kaiser Mayer Olkin*)
   KMO is used to determine the feasibility of a variable in determining the sustainability of the factor analysis technique used. The determination of the KMO value is > 0.50.

2. Anti-Image Matrices
   Anti-Image Matrice helps know and determine which variables are suitable for use in factor analysis. The value of Anti-Image Correlation (MSA: Measure of Sampling Adequacy) is > 0.50.

3. Extraction
   Factor Extraction is a method used to reduce data from multiple indicators to produce fewer factors that can explain the correlation between observed indicators.

4. Factor Rotation
   This factor rotation is needed if the factor extraction method fails to produce a clear main factor component. This factor rotation aims to obtain a more straightforward factor structure for easy interpretation.

III. RESULTS AND DISCUSSION

Based on the results of data processing and factor rotation that has been carried out, nine new factors were obtained from the initial factor grouping, which amounted to 38 factors. Each factor is explained as follows:

a. Information System Flexibility

The formation of the new information system flexibility factor consists of 7 indicators. Indicators forming the Information System Flexibility Factor consist of 1) Using FinTech because of recommendations from others, 2) FinTech provides many benefits in making transactions, 3) Using FinTech is influenced by surrounding circumstances, 4) FinTech services can be trusted, 5) Transactions become more effective by using FinTech, 6) FinTech can be used at any time, and 7) People's income helps FinTech transactions. The information system flexibility factor is supported by the highest indicator value, which is using FinTech because of recommendations from others. It shows that someone knows and uses FinTech because of recommendations from other people because, currently, FinTech is one of the trends in making transactions. According to the Merriam-Webster Dictionary, flexibility is the organization's ability to respond to internal and external environmental changes. Meanwhile, the flexibility of information systems **[11]** can be interpreted as the ability of an information system to address or respond to user needs for new, different, or changing needs and related aspects of the products produced by the information system. FinTech services have provided significant changes in transactions because FinTech flexibility can affect the operational efficiency and effectiveness of information systems in FinTech **[15]**.

b. Ideal

The Ideal forming factor consists of 4 indicators. The Ideal factor indicators consist of: 1) FinTech provides a fast response to user requests, 2) Through the use of FinTech can increase user performance productivity, 3) FinTech helps in online-based transaction activities, and 4) FinTech provides response facilities if there is a system failure or error. The ideal factor is formed with the highest indicator value on the FinTech indicator providing a fast response to user requests. Based on the various existing forming factors, FinTech provides new experiences, speedy responses, increased performance productivity, online-based transaction activities, and responses to system failures or errors. It illustrates the ideal conditions in the current global conditions. Ideal in the Big Indonesian Dictionary (KBBI) is very much under what is aspired to (https://kbbi.web.id/). FinTech is a product of digital technology innovation for financial services to production processes or products related to providing financial services that provide ideal facilities **[16]**. FinTech can increase financial efficiency at a low cost **[17]**, and FinTech is recognized as one of the most critical innovations in the financial industry. It is overgrowing, driven partly by sharing economy, regulation, and information technology **[18]**.

c. Use Value

The new value-in-use factor is based on four indicators. The forming factor consists of indicators: 1) FinTech has

many uses in supporting various transaction activities, 2) Economic disparity is not an obstacle in conducting FinTech transactions, 3) I am interested in utilizing FinTech services for transaction activities, and 4) Service features on FinTech follow according to the development of transaction activities.The highest indicator of the use value factor is that FinTech has many uses in supporting various transaction activities. FinTech supports various transaction activities that make it easier for users to make transactions in online shopping and conventional transactions that support FinTech transactions. Value in use in the economic dictionary means that the value of goods or services is determined based on their direct use for the user. It shows that FinTech can act as a technological tool to facilitate the transaction process between buyers and sellers and reduce gaps or fraud in the transaction process **[18]** without using paper instruments. FinTech also has a vital role in changing consumer behavior and expectations **[19]**. It can access data and information anytime and anywhere and treat users equally so that they tend to have high expectations even for users from the lower class.

d. Ability

The new Ability value factor is formed based on five indicators. The forming factor consists of some indicators: 1) Economic disparity is not an obstacle in conducting FinTech transactions, 2) FinTech transaction activities can be carried out by all groups, both middle and upper class, 3) The information structure on FinTech services can be easily understood by its users, 4) People's income does not hinder FinTech transactions, and 5) The information submitted on FinTech is complete and easy to do. The highest indicator of the ability factor is that economic disparity is not an obstacle in conducting FinTech transactions. It indicates that FinTech can be used by all circles, both upper and lower classes. Economic disparity is not one of the inhibiting factors for using FinTech services. FinTech will provide the same service to its users. *Ability* is usually defined as the ability to do something. It means the advancement of FinTech and mobile technology for financial companies, driving FinTech innovation that emerged after the global financial crisis in 2008 by combining e-finance, internet technology, social networking services, social media, artificial intelligence, and Big Data analytics. FinTech is recognized as one of the most critical innovations in the financial industry and is overgrowing, driven partly by the sharing economy, regulation, and information technology **[20]**. *FinTech* has developed in various sectors **[21]**, from payment start-ups, lending, financial planning, retail investment, financing, remittances, and economic research.

e. Convenience

The new factor, Convenient, is formed based on two indicators. The indicators of the formation of Convenient consist of 1) Menus and service features on FinTech are easy to understand, and 2) FinTech has complete information services for transaction needs. The highest indicator of the convenience factor is that the menu and service features on FinTech are easy to understand. It shows that FinTech

provides good service for users in terms of display and grammar that is easy for new and old users to understand or follow, which causes users to feel comfortable using FinTech services.The results of this study indicate that the quality of a sound FinTech system can be seen from convenience, availability, suitability, and response time. If users feel all of these things, it will cause users to reuse the system [21] so that the intensity of use of the FinTech system increases.

f. Safety

The new Safety factor is formed based on three indicators. Safety forming indicators consist of 1) the existence of FinTech provides a sense of comfort for its users, 2) FinTech as a safe payment model, is used in transaction activities, and 3) FinTech always adapts technology to support the service needs of its users. The highest indicator of the information system flexibility factor is the existence of FinTech provides a sense of comfort for its users. It shows that FinTech provides comfort and security in FinTech services because FinTech maintains customer information so that customers feel comfortable with FinTech services. In general, security is a set of procedures and programs to verify the source of information and ensure the integrity and privacy of that information **[22]**. Perceived security is defined as the extent to which people believe FinTech is safe to protect sensitive information **[23]**. In simple terms, perceived security is the user's perception of the system in their financial transactions safely and keeping their personal information confidential, which will affect the level of use of the FinTech transaction system **[24]**. Security can be categorized into three aspects: system, transaction, and legal security. It shows that FinTech transactions can be considered reliable when all transaction processes can satisfy user needs and their expectations of the level of security **[25]**. Furthermore, security is a consumer's subjective expectation of the level of trust in the system security, privacy, transactions, and laws of the FinTech transaction system.

g. Interactive

The new Interactive factor is formed based on four indicators. The Interactive forming indicators consist of 1) FinTech can support the activities of its users, 2) FinTech provides responses according to the transaction needs of its users, 3) FinTech is always responsive in responding to system improvements, and 4) FinTech sets low fees in transactions compared to payment methods outside FinTech. The best indicator of the Interactive factor is that FinTech can support its users' activities. It shows that FinTech is very supportive of user activities. FinTech is quick to respond to user needs, such as currently, there are many promotions provided by FinTech services. It supports financial service users in transacting through FinTech. Financial transactions through FinTech include payments, investments, money lending, transfers, financial plans, and comparison of financial products. So some people widely use them because the consumer community finds it easy to interact through FinTech in their financial transactions **[26]**. That the existence

of FinTech is very supportive in making it easier for the community/users of financial services **[27]**.

h. Activity

The new factor Activity is formed based on two indicators. Activity forming indicators consist of 1) FinTech transactions saving time and effort, and 2) FinTech can be used without regional restrictions. The highest indicator in the activity factor is that FinTech transactions save time and effort. It shows that FinTech transactions save time and energy. Because current users can queue quickly for transactions, even FinTech can now be accessed on a personal smartphone, making it easier for users to transact online. Based on the benefits of FinTech, activities can be supported quickly, especially when conducting financial transactions. In terms of data development, more and more FinTechs are present in Indonesia and can be enjoyed directly by the entire community. With various user conveniences, people unconsciously use FinTech to carry out financial transaction activities that raise public perceptions of FinTech users **[28]**.

i. The Length of Transaction Time

The new factor Long Transaction Time is formed based on one indicator. The indicator forming Long Transaction Time is that the transaction time required is more efficient by using FinTech. It shows that FinTech services are better in terms of transaction processing time provided by FinTech services compared to other financial services. Because currently, many people complain about traditional payment services that cause long transaction queues. Many consumers/users feel the benefits of FinTech, which makes financial transactions easier **[29].** Furthermore, service improvement in financial technology services can be made through various service improvement efforts. These improvement efforts can be carried out by the factors formed, namely:

a. Make improvements through flexible services such as improving information system services available in Fintech services by adjusting the wishes of service users. The flexibility of information systems developed in financial services always considers the expectations of service users.
b. Response to service users so that these service users get fast service, ease of transactions using digital technology, and responsiveness to transaction errors.
c. Provision of service facilities supports service user transaction activities, 2) the availability of existing facilities can meet all service user groups, and 3) transaction facilities must be able to follow user demands (up to date).
d. Simplification of the structure of the information system available so that all levels of users of financial services can utilize it.
e. Adjust the menu and features of the services provided to meet users' needs when carrying out transactions.
f. Services that provide a sense of security and comfort for users when making transactions.

g. Improvement of facilities that are tailored to the needs of transaction activities of users and provide competitive transaction fees compared to other financial services.
h. It improves the quality of efficient services and can be used without regional restrictions.

It improves the quality of timeliness of transaction services to save time used by service users.

IV. CONCLUSION

The shift of financial service users from using conventional services to information technology / financial technology-based services consists of 9 factors, namely: 1) Information System Flexibility; 2) Ideal; 3) Use Value; 4) Ability; 5) Convenient; 6) Safety; 7) Interactive; 8) Activity; 9) Length of Transaction Time. Service improvements that can be made to FinTech financial services can be made through 1) service quality, 2) response time and service availability, 3) providing an understanding of perceived usefulness and providing an understanding of perceived ease of use, 4) completeness and low price, 5) convenience of access and suitability of service facilities, 6) providing user security and trust, 7) availability of easy-to-use facilities, 8) improving system quality without regional restrictions, 9) quality of transaction timelines

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