People's Behavior in Using Financial Technology: In Terms of Making Payment Transactions

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Abstract. The current study aims to examine the behavior of individuals in Indonesia regarding using financial technology: in terms of making payment transactions. The research design utilized in this study is a correlation-based cross-sectional design conducted through a questionnaire A total of 50 sample. The study reveals that financial technology knowledge is positively. The results of the research show that financial technology knowledge is positive with an attitude towards using financial technology. This research can help readers identify financial technology knowledge so as to increase each individual's understanding of financial technology in facilitating transactions.

Keywords: Financial Knowledge, Financial Technology, Transaction

1 Introduction

Industrial Revolution 4.0 signifies a transformative epoch characterized by the profound integration of digital technologies into industrial processes. This era is defined by the convergence of Internet of Things (IoT), artificial intelligence (AI), cloud computing, big data analytics, and robotics, collectively optimizing production, enhancing efficiency, and generating novel value propositions within diverse industrial domains [1].

The pivotal role of technology and digital transformation within the Fourth Industrial Revolution is undeniable. Digital technologies empower organizations to amass, curate, and scrutinize substantial datasets with unprecedented speed and accuracy [2]. This facilitates data-driven decision-making, characterized by precision and comprehensiveness. Moreover, digital tools optimize supply chain networks, enhance production efficacy, and expedite product development cycles.

The Fourth Industrial Revolution has ushered in a new era for the financial sector, characterized by the convergence of traditional banking practices with cutting-edge technologies. The integration of big data analytics, artificial intelligence, blockchain protocols, and robust

cybersecurity frameworks within fintech platforms has unlocked unprecedented opportunities to streamline operations, enhance customer experiences, and foster financial inclusion.

Financial technology (FinTech) and digitalization have emerged as indispensable catalysts within the Fourth Industrial Revolution, profoundly impacting financial landscapes [3]. By democratizing access to financial services, FinTech has significantly mitigated financial inequality. Through intuitive mobile applications, individuals, even in geographically marginalized regions, can seamlessly establish bank accounts, execute fund transfers, engage in digital payments, and leverage a spectrum of financial tools. This transformative shift empowers previously excluded populations, fostering greater financial inclusion.

However, challenges and risks also exist in the implementation of financial technology. Data security and privacy are major concerns in the use of financial technology. In collecting and managing customer data, strong data protection must be implemented to prevent misuse and privacy violations.

This research delves into the critical role of financial technology (FinTech) and digital transformation in reshaping the financial landscape within the context of Industry 4.0. Through a comprehensive analysis of existing literature, this study aims to illuminate the transformative impact of FinTech on the financial industry and the mechanisms through which digitalization has catalyzed this evolution. The findings of this research are anticipated to provide invaluable insights for financial professionals, academic researchers, and policymakers in comprehending the pivotal role of FinTech in navigating the complex challenges and opportunities presented by this era.

Literature Review

Technology acceptance model

The Technological Acceptance Model (TAM), initially proposed by Davis, is an extension of the Theory of Reasoned Action (TRA) specifically designed to predict user acceptance of information systems. TAM aims to elucidate the key factors influencing technology adoption and explain the diverse behaviors of end-users across various technological contexts. Essentially, a model should not only forecast user behavior but also provide insights into the underlying reasons for technology acceptance or rejection, enabling researchers and practitioners to identify areas for system improvement and implement corrective measures.[4]

Ultimately, TAM's core objective is to elucidate the impact of external influences on internal cognitive constructs such as beliefs, attitudes, and behavioral intentions. To accomplish this, TAM was developed by identifying key variables derived from prior technology acceptance research and employing the Theory of Reasoned Action as a theoretical framework to model intervariable relationships.

The Technology Acceptance Model (TAM) posits five core constructs: perceived utility, perceived ease of operation, user attitude, behavioral intent, and actual usage. These elements dynamically interact to shape an individual's inclination to engage in a specific behavior.

Initial perceptions of a system's utility (perceived usefulness) arise when individuals believe it can enhance their work efficiency. [5] posits that technology adoption is contingent on users comprehending its potential benefits.

Perceived ease of use, a key factor in technology adoption, refers to the extent to which users believe a system is simple to operate. [6] emphasized that this perception influences users' willingness to employ a technology by reducing perceived effort. Essentially, if users believe a system is easy to use, they are more likely to adopt it.

User attitudes towards technology adoption are shaped by their overall evaluation of the system. [7] highlighted the role of attitude in predicting behavioral intentions. Positive attitudes towards a technology increase the likelihood of its use, while negative attitudes may deter adoption. This suggests that fostering positive user experiences is crucial for successful technology implementation.

[8] reflects a user's planned behavior towards a technology. It is influenced by factors such as attitude, perceived ease of use, and subjective norms. Understanding users' intentions can help predict actual usage and inform strategies to encourage adoption. For example, highlighting the benefits of using a system can positively impact users' intentions.

Actual use represents the real-world application of a technology. It is influenced by various factors, including system usability, perceived usefulness, and external factors. As [9], [10] noted, a positive user experience, characterized by ease of use and perceived benefits, is likely to lead to increased system usage and satisfaction.

Financial technology

[11] Financial technology, or fintech, is the innovative application of technology to deliver financial services efficiently and accessibly. Fintech aims to change the traditional way of carrying out financial activities by utilizing technological innovations such as mobile applications, online platforms and digital payment tools. Fintech has experienced rapid development over the last few years. Initially, Fintech mainly developed in the payment sector with the emergence of mobile payment applications such as PayPal, Venmo, and Alipay. However, over time, Fintech has expanded to various other sectors. For example, financial technology companies like Robinhood and EXTRADE have changed the way people invest by providing easy-to-use online trading platforms with no transaction fees. Other companies such as SoFi and Lending Club have introduced peer-to-peer lending models that allow individuals and small businesses to gain access to financing more easily.

Financial technology has revolutionized the financial landscape, notably by expanding access to financial services for previously marginalized segments of the population. Mobile applications have revolutionized financial accessibility, enabling individuals, particularly in remote areas, to effortlessly open bank accounts, execute digital transactions, and leverage diverse financial services [12]. This technological advancement has mitigated financial disparities while empowering individuals to exercise greater control over their financial affairs. Moreover, Fintech innovations have fundamentally transformed the landscape of financial transactions. With the adoption of technology such as blockchain, financial transactions can be carried out safely, quickly and transparently. This technology has eliminated the need for traditional intermediaries in the transaction process, such as banks or traditional financial institutions, potentially reducing costs and increasing efficiency.

Fintech has provided significant benefits to consumers. They can access financial services more easily and quickly. For example, mobile banking apps allow consumers to make transactions, check balances, and manage their finances with just a few taps on their phone screen. Apart from that, Fintech has also brought innovation in financing, investment and insurance. Through

Fintech platforms, individuals can obtain loans with a simpler and faster process, invest in the stock market at lower costs, or get insurance that suits their needs. On the financial institutions side, Fintech has driven innovation and digital transformation. Many banks and traditional financial institutions are adopting Fintech technology to improve their services and stay competitive. They are investing in mobile application development, improving transaction security, and leveraging big data and artificial intelligence for better risk analysis and decision making. However, challenges also arise along with the development of Fintech. Data security and privacy are major concerns. In collecting and managing customer data, strong data protection must be implemented to prevent misuse and privacy violations. In addition, appropriate regulations are also needed to supervise Fintech operations and ensure consumer protection and financial system stability.

Fintech has changed the landscape of the financial industry by providing faster, easier and more affordable solutions for individuals and companies. By combining information technology and finance, Fintech presents various products and services covering several areas, including:

QRIS (Quick Response Code Indonesian Standard):

QRIS is a QR code standard used in Indonesia to facilitate digital payments. QRIS has become a significant innovation in the Fintech industry, allowing users to make payments quickly, easily and securely via QR code scanners found in physical stores, apps or websites. QRIS aims to simplify and unify various digital payment methods into one QR code that can be read by various payment applications and platforms. QRIS has several important functions and advantages. First, QRIS helps simplify the digital payment process by combining various payment methods into one QR code. Users can make payments using methods such as bank transfer, e-wallet, credit or debit card through the same QR code scanner. This eliminates the need to install and use dedicated payment apps for each payment method.

Mobile Banking (m-Banking):

Mobile banking, or m-Banking, is a banking service that can be accessed via a mobile device such as a smartphone or tablet. m-Banking has become one of the most popular Fintech products. This service allows users to carry out various banking transactions easily and quickly through applications provided by banks or financial institutions.

E-Money

E-Money or electronic money, as the name suggests, is money packaged into the digital world, so it can be said to be an electronic wallet. Money This can generally be used for shopping, paying bills, etc. through an application. 16 Since the government encourages electronic money payments, such as to enter toll roads, train tickets, state-owned tourist attractions and so on, without realizing it, the function of money which was previously a legal means of payment becomes starting to be abandoned, replaced by digital cards which are more practical and safer for brought. Examples of E-Money currently circulating are Flash BCA, EMoney Mandiri, Brizzi BRI.

2. Method

The research design utilized in this study is a correlation-based cross-sectional design conducted through a questionnaire, this research examines People's behavior in using financial technology: in terms of making payment transactions, this research is based on the Technology Acceptance Model.

This questionnaire-based survey can verify data statistically, in this online survey using a Google form which is distributed via social media platforms such as WhatsApp, Instagram, Facebook. This questionnaire is divided into two parts, where in the first part respondents are asked to fill in their name, gender, domicile, age and occupation. in the second part is the questionnaire which covers financial technology knowledge, Perceived Usefulness of financial technology, Attitude towards, Behavior Intention, and Actual system use of financial technology. Respondents are required to answer these questions on a scale of 1-5 where 5 is strongly agree with the statement in the questionnaire. In this study, 50 respondents were collected.

3. Results and Discussion

In total, 50 participants completed the questionnaire. This research sample also met the minimum sample size requirement. In addition, the participants were Indonesian people. Most of the participants were between 18-20 years old (72%) and 21-25 (24 %). The participants consisted of males (58%) and females (42%). Most were domiciled in Jakarta.

Table 1. Participants

Characteristic	Frequency(n)	Percentage
Age group		
18-20	36	72%
21-25	12	24%
26-30	0	0%
31-35	0	0%
36-40	1	2%
40 and above	1	2%
Gender		
Male	29	58%
Female	21	42%
Domicile		
Bandung	3	6%
Bekasi	7	14%
Bogor	4	8%
Cirebon	1	2%
Depok	4	8%
Jakarta	28	56%
Medan	2	4%
Tangerang	1	2%

For evaluating the acceptance of individuals whose financial technology, we will be using a 5-point scale, where 1 indicates "strongly disagree" and 5 indicates "strongly agree". This scale will help assess the acceptance of use financial technology. To measure the individual respondents' level of financial technology knowledge, we will use the statement "I am very

knowledgeable about financial technology", and participants will rate their agreement on a scale of 1-5.To measure Perceived Usefulness financial technology participants will rate their agreement to the statement " ease of accessing financial technology " using the 1-5 scale.

 For assessing attitudes towards financial, participants will rate their agreement to the statement " Financial technology is mostly good for a person " using the 1-5 scale. To measure behavioral intentions, participants were asked to what extent people use or want to use financial technology through the question "I intend to use financial technology" from which they would rate on a scale of 1-5. Finally, to measure actual use of financial technology systems, participants were asked to indicate that they felt helped after using financial technology as measured by the statement "I was greatly helped by financial technology" on a scale of 1-5.

Table 2. Measurement Model Assessment

Constructs/ Items	Factor Loading	CR	AVE
Financial Technology Knowledge I am very knowledgeable about financial technology		0.944	0.809
I am knowing more than most people about financial technology	0.885		
I understand the payment procedures financial technology	0.896		
When using financial technology. I know what	0.916		
I'm going to do	0.901		
Perceived Usefulness Financial Technology		0.912	0.726
Ease of accessing financial technology ease in understand the apparency of financial	0.915		
Technology no special skill is need to use financial	0.902		
Technology think about financial technology can facilitate	0.649		
payment transactions	0.911		
Attitude Toward Financial technology is mostly good for a person		0.929	0.813
I think everything will be good about financial	0.869		
if use financial technology	0.929		
I look forward to it using financial technology	0.906		
Behavior Intention		0.963	0.896
I intend to using financial technology	0.951		

Table 3. Discriminant Validity Assessment Using the HTMT Matrix

Construct	Actual System Use Financial Technology	Attitude Toward Behavioral Intention	Financial Technology Knowledge	Subjective Norms	Perceive Usefulness Financial Technology
Heterotrait-Monotrait ratio of correlation (HTMT)					
Actual System Use Financial Technology					
Attitude Toward Behavioral Intention	0.650				
Financial Technology Knowledge	0.752	0.952			
Subjective Norms	0.770	0.813	0.903		
Perceive Usefulness Financial Technology	0.773	0.824	0.800	0.898	

Table 4. Structural Model Assessment

Total Effect Model	Standardized Path Coefficients	t- value	Confidence level (Lower bound. Upper bound)	P- value	Decision
Attitude -> Intention (H_1)	0.707	5.923	(0.328, 0.853)	0	supported
Intention -> Actual system (H_2)	0.695	6.130	(0.459, 0.894)	0	supported
Knowledge -> attitude (H_3)	0.42	1.595	(-0.093, 0.923)	0.111	not supported
knowledge -> usefulness (H_4)	0.824	20.286	(0.725, 0.886)	0	supported
Usefulness -> Attitude (H_5)	0.385	1.334	(-0.156, 0.950)	0.183	not supported
Usefulness -> intention (H_6)	0.224	2.249	(0.039, 0.486)	0.025	supported

Note: $p<0.05$

This research examines knowledge about financial technology, Perceived Usefulness of financial technology, Attitudes towards, Behavioral Intentions, and Actual use of financial technology systems. The aim is to find out the extent of public knowledge about financial technology and how to use it to facilitate transactions in the industrial era 4.0. Fintech has changed the way we carry out Payment Transformation. Digital payment methods such as ewallets, app payments and QR code payments are becoming more common. Transactions become faster, safer and more comfortable. In addition, blockchain technology also enables the development of digital currencies and decentralized payment systems such as crypto. One of the main impacts of fintech is increasing financial accessibility. Through digital services, fintech

has helped encourage financial inclusion by financially empowering marginalized communities. Those who previously did not have access to a bank account or traditional financial services can now use digital banking applications, e-wallets, or online loan services to manage their finances. The findings of this research show that Attitudes towards fintech are positively correlated with Indonesian People's Intentions (H1), meaning that knowing about fintech encourages people to use it thereby strengthening the distribution of state and individual funds.

This research also found an important positive correlation between Intention and Actual systems (H2). These findings demonstrate the importance of offering more opportunities for individuals to improve their Intentions as this will improve their behavior in this aspect, ultimately helping to improve the Actual system. In addition, the findings of this study indicate a negative relationship between knowledge about fintech (H3) and attitudes, as well as a positive relationship between knowledge usefulness (H4). The results of this study align with the tenets of the Technology Acceptance Model (TAM), which posits that an individual's inclination to engage with a technology is shaped by their perceptions of its utility, usability, and overall attitude towards it, ultimately influencing their behavioral intention and subsequent use.

Unexpectedly, this study's findings indicate that Indonesian public perception of fintech is not significantly influenced by their fintech knowledge, despite the industry's substantial transformation. Nevertheless, the study underscores the pivotal role of subjective norms and personal experiences in shaping fintech awareness.

Finally, this research finds that Usefulness (H5) has a negative correlation with Attitude, while Usefulness (H6) has a positive correlation with Intention. The results of the research show that a person's usefulness to himself does not affect his attitude. On the other hand, Usability impacts intent, supported by TAM research. In discussions about fintech, it is important to consider its positive aspects such as financial inclusion and innovation, while being aware of emerging challenges such as data security and proper regulation. With the right approach, fintech has huge potential to change the way we manage finances and bring significant benefits to individuals and society as a whole.

4. Conclusion

This study examines examine the behavior of individuals in Indonesia regarding using financial technology: in terms of making payment transactions. A cross-sectional correlational research design was employed, and data was collected through an online questionnaire administered via Google Documents. A total of 50 participants, all Indonesian individuals, completed the questionnaire, meeting the required minimum sample size. The majority of participants were aged between 18-20 years old (72%) and 21-25 (24 %). The participants consisted of males (58%) and females (42%). Most were domiciled in Jakarta. The measurement and structural models were assessed using the partial least squares (PLS) structural equation modeling (SEM) method in SmartPLS version 3.0. The study utilized the Technology Acceptance Model (TAM) with five components, namely Perceived Usefulness, Perceived Ease of Use, Attitude Toward Using, Behavioral Intention to Use, and Actual Use. The results of this research indicate that Perceived Usefulness, Perceived Ease of Use, Attitude Toward Using, Behavioral Intention to Use, and Actual Use. The results of the research show that financial technology knowledge is positive with an attitude towards using financial technology. However, Financial technology (financial technology or fintech) has become a significant transformational force in the financial industry. Through the use of digital technology and innovation, fintech has changed the way we conduct financial transactions, manage personal finances, access financial services and invest.

Furthermore, Fintech has provided access to financial services to millions of people previously unserved by the traditional banking system.

To summarize, this study aimed to examines the behavior of individuals in Indonesia regarding using financial technology. A cross-sectional correlational research design was used, and data was collected through an online survey using a questionnaire. The minimum required sample size of 50 participants was met, and the participants were Indonesian. They were predominantly between 18-25 years old, with equal representation of males and females. The TAM (Technology Acceptance Model) with five components, namely Perceived Usefulness, Perceived Ease of Use, Attitude Toward Using, Behavioral Intention to Use, and Actual Use.

In conclusion, these findings show that knowledge alone is not enough to determine the usefulness of financial technology. Other factors such as Attitudes towards, Behavioral Intentions, and Actual Use of Financial Technology Systems. With Fintech transactions become faster, safer and more comfortable. In addition, blockchain technology has also enabled the development of digital currencies and decentralized payment systems such as crypto. Fintech also provides Data Security and Privacy to protect consumer privacy.

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