MOBILE PAYMENT SATISFACTION
POST PANDEMIC COVID-19 IN INDONESIA

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ABSTRACT

This study aims to examine the effect of technology security, ease of use, usability, and continuous improvement on the satisfaction of mobile payment users. This study uses a purposive sampling technique with certain criteria. The population of this study are respondents who have used m-payment services during the Covid-19 pandemic from 2020 to 2021 in Indonesia. Questionnaires were distributed through an online survey method with a total sample of 317 respondents. Hypothesis testing was carried out using Structural Equation Modeling (SEM) AMOS 23. The results showed that technology security had a positive effect on mobile payment satisfaction, ease of use had a positive effect on mobile payment satisfaction, usability had a positive effect on mobile payment satisfaction, continuous improvement had a positive effect on satisfaction mobile payments, and satisfaction have a positive effect on the trustworthiness of mobile payments. This research provides information to payment service providers to continuously improve improvements in all aspects of services, especially security and ease of use, as well as benefits for consumers in conducting financial transactions.

Keyword: **Mobile payment satisfaction, technology security, ease of use, usefulness, continous improvement**

ABSTRAK

Penelitian ini bertujuan mengkaji pengaruh keamanan teknologi, kemudahan penggunaan, kemanfaatan, dan perbaikan berkelanjutan terhadap kepuasan pengguna pembayaran seluler. Penelitian ini menggunakan teknik purposive sampling dengan kriteria tertentu. Populasi penelitian ini yaitu responden yang pernah menggunakan layanan m-payment selama masa pandemi Covid-19 tahun 2020 hingga 2021 di Indonesia. Kuesioner disebarkan melalui metode survei online dengan jumlah sampel responden sebanyak 317 orang. Pengujian hipotesis dilakukan dengan menggunakan Structural Equation Modeling (SEM) AMOS 23. Hasil penelitian menunjukkan bahwa keamanan teknologi berpengaruh positif terhadap kepuasan pembayaran mobile, kemudahan penggunaan berpengaruh positif terhadap kepuasan pembayaran mobile, kegunaan berpengaruh positif terhadap pembayaran mobile kepuasan, perbaikan berkelanjutan berpengaruh positif terhadap kepuasan pembayaran seluler, dan kepuasan berpengaruh positif terhadap kepercayaan pembayaran seluler. Penelitian ini memberikan informasi kepada penyedia layanan pembayaran untuk terus meningkatkan perbaikan di segala aspek layanan terutama keamanan dan kemudahan penggunaan, serta kemanfaatan bagi konsumen dalam melakukan transaksi keuangan.

Kata Kunci: **Kepuasan pembayaran m-payment, keamanan teknologi, kemudahan, kebermanfaatan, perbaikan berkelanjutan**

Introduction

The development of the financial industry is strongly supported by technology that makes financial services more efficient by providing digital payment services. The system is very relevant and useful to support the development of e-commerce in Indonesia. Fintech is a combination of the financial industry and technology whose scope consists of payments, lending, financial planning, retail investment, financing, remittances and financial research (Plukker et al., 2015). Along with the outbreak of the Covid-19 virus in the world which is a global pandemic category, the Indonesian government has imposed social and

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physical distancing restrictions and encouraged consumers to use mobile payment systems instead of conventional payments, both electronic commerce and conventional commerce.

Mobile payments use smartphones which known as mobile payments. The mobile payment system is attractive because consumers can make payments everywhere and do not need to make direct contact between sellers and buyers, especially during the Covid-19 pandemic which requires everyone to carry out physical and social restrictions. After the Covid 19 pandemic, Bank Indonesia as the central bank continued to improve payment system policies that were fast, easy, cheap, safe, reliable, and inclusive in order to encourage economic growth, especially from increasing public consumption. On the non-cash side, the value of electronic money transactions in the first quarter of 2022 recorded an annual growth of 42.06 percent (year-on-year/yoy). Furthermore, an increase also occurred in the value of digital banking transactions in the first quarter of 2022. The value of digital banking transactions has increased by 34.9 percent yoy and for the whole 2022 is projected to increase by 26.72 percent yoy reaching IDR 51,729 trillion. While the amount of electronic money in circulation reached 594.17 million units in February 2021. In details, there are 512.98 million units (86.34 percent) that server-based electronic money and 81.19 million units (13.67 percent) that is chip or card based. The amount of electronic money grew by 3.28 percent compared to the position at the end of last year (year to date/ytd). This number also grew by 30.49 percent compared to the position in February 2021 (year on year / yoy) (Bank Indonesia, 2022). This data is becoming an issue that the development level of m payment transactions has increased very rapidly and it is necessary to evaluate the level of satisfaction of m-payment users.

This study was conducted to analyze the satisfaction of users of the mobile payment application platform. The model that will be used to measure user satisfaction is the Technology Acceptance Model (TAM) method. TAM is one of the models built to analyze and understand the factors driving someone to adopt a technology that emphasizes the importance of benefits example usability and ease of use (Ajze and Fishbein, 2007). Previous research has shown that the intention to use a mobile payment system is influenced by external factors focusing on the readiness to adopt a mobile payment system (ease of use, facilitating conditions, technology security) and lifestyle (compatibility) in determining the intention to use the system (Huddin et al., 2021). Meanwhile research that reaches consumer satisfaction is still very rarely found. Research conducted by mobile payment consumers in America shows convenience factors and shopping incentives, especially the use of credit cards (Garrett et al., 2014). Similar research was also conducted in India (Singh et al, 2017) with the results research shows that there is a significant relationship between perceptions, preferences, usage, and customer satisfaction. Unfortunately, there is still little effort to fill the gap in terms of user satisfaction behavior and its context in a developing country like Indonesia.

Research on the intention in using a technology is usually driven for economic reasons such as usability, ease of use (Huddin and Masitoh, 2021), security, privacy, risk (De Luna et al., 2019), performance expectancy, effort expectancy, social influence, facilitating conditions, compatibility (Huddin et al.,

2021 and Patil et al., 2020). However, the recent research only discuss about the intent and has not examined user satisfaction. In addition, research on the use of mobile payments is still relatively new, especially in Indonesia and in the context of Covid-19. Previous research has been conducted in India (Singh et al., 2017 and Sinha et al., 2019), Thailand (Phonthanukitithaworn et al., 2016), Spain (De Luna et al., 2019), United Kingdom and Lebanon (Merhi et al., 2019), Portugal (Oliveira et al., 2016) and America (Garrett et al., 2014). Thus, it is possible that the above factors have a different influence on consumers in Indonesia whose different cultures from consumers in other countries.

In addition, the results of previous studies showed inconsistent results, where research by Liao and Cheung (2008) and Huddin (2019), found that ease of use had a significant effect on satisfaction with mobile payment payments, while research Chandra (2019) and De Luna et al. (2019), did not find this effect. Therefore, further research is still needed to investigate the factors of satisfaction using mobile payments by including attitude as a link to these factors.

Several previous studies have shown that security has a positive and significant effect and plays an important role as a determinant of satisfaction with using m-payments (Liao and Cheung, 2008; Garrett et al., 2014; Huddin, 2019). The results of this study contradict the results of research conducted by Pakarti and Rofiah (2019) and Zaipin and Sunyoto (2012), which state that security does not significantly affect customer satisfaction. Therefore, further research is needed to investigate the determinants of consumer satisfaction in making m-payment, researchers are motivated to seek information to answer the inconsistency.

This study aims to re-examine effect of technology security, ease of use, usefulness and continuous improvement on mobile payment user satisfaction in Indonesia during the pandemic Covid-19 which in previous research is still inconsistent. This research also contributes practically, provides m payment information to continuously improve improvements in all aspects of services, especially security and ease of use, and usefufness for consumers to carry out financial transactions.

Literature Review
Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a model to predict and explain how technology users accept and use the technology in the user's individual work. The purpose of this technology acceptance model is to explain individual attitudes towards the use of a technology. TAM theory describes that there are two factors that dominantly affect technology integration. The first is the perception of usefulness. While the second is the perception of ease of use of technology. In this study, TAM used as the basis for the hypotheses, namely the usefulness and the ease of use of information technology which will affect the intensity of behavior towards to use information technology in a sustainable manner (Ajzen and Fishbein, 2007). The emphasis of TAM theory is that users will act rationally when they decide to use a technology, in this study also tries to examine technology security and continuous improvement for ensure that consumers will be satisfied.

Satisfaction

User satisfaction is the main goal to be achieved by service providers. Satisfaction is the response and feedback that occurs from users who have used an information system (Machmud, 2018). User satisfaction occurs due to preferences attitude toword the information system used. User satisfaction is the comparison between user expectations and the results which obtained from experience when using information systems (Huddin, 2019). The more appropriate the experience and expectations, the higher the level of user satisfaction will be.

Trust

Trust is the willingness of a consumer or individual to depend on outside parties involved in conducting transactions. In the m payment aspect, trust is a belief that will make consumers feel safe in doing online shopping after studying the sellers' characteristics (Patil et al., 2020). Common beliefs result on behavioral intentions and satisfaction. Patil et al. (2020) defines trust as a subjective belief that will be carried out in fulfilling transactional obligations, because these obligations are understood by consumers. Trust in the m-payment system is the willingness of consumers to rely on buying and selling transactions and taking action even though the seller's transactions can easily harm them.

Mobile Payment

Mobile payment is a transaction process carried out using a cellular such as a cell phone, smartphone, or other wireless-capable device that is able to process financial transactions securely through a cellular network, or through various other wireless technologies such as NFC, Bluetooth, RFID and so on (Ikhsan, 2020). Mobile payments offer an attractive payment system for the retail market in several characteristics (Mallat et al., 2009). This is believed to be able to increase the environmental complexity in adopting mobile payments. Therefore, the mobile payment system is one of the means that can be used and is profitable for consumers and sellers in conducting financial transactions.

Technology Security

Tecnology security is a set of procedures and programs to verify the source of information and ensure the integrity and privacy of that information (Chung, 2019). Information security issues arise when users feel that the company is unable and unwilling to make efforts to safeguard users' financial information. Therefore, companies must provide a sense of security for the users of mobile payment services in conducting financial transactions with the aim of minimizing their worries (Oliveira et al., 2016) and increasing the perception of security.

Ease of Use

Ease of use of mobile payment indicates that a technology used is free from complexity and problems (Davis et al., 1989). Technology is considered easier to use will tend to be more convenience for individuals to accept, especially if the technology is simple for the users or without spending a lot of effort, the higher the

convenience, the lower the effort required (Sinha et al., 2019) The current payment system using m-payment has many advantages when compared to card-based or manual payments, especially in terms of comfort and ease of used.

Usefulness

Usefulness defines as the degree to which a person believes that using a particular system would enhance his or her job performance (Davis et al., 1989). This indicates that this convenience has a direct effect on an individual's intention to adopt a technology, by using a technology the activity carried out by an individual will be greatly helped. For example, payment applications exist for busy individuals and do not have much free time to queue and pay toll payment bills, therefore they can make payments through mobile payment applications which provides great benefits for them.

Continuous Improvement

Continuous improvement is the sustainable improvement to the service quality of the mobile payment system. Mobile payment systems use technology as it system, where the technology is changing very quickly, innovation and continuous expansion of the payment system are needed to keep up with the needs and demands of users (Liao and Cheung, 2008). Therefore, with very strong competition in payment service providers, service providers must always improve continuous improvement in all existing aspects in order to meet consumer desires.

Hypotheses Development and Research Model
Technology Security to Mobile Payment Satisfaction

TAM theory that uses a behavioral theory approach that is widely used to examine the process of adopting information technology. Apparently, model TAM indicators have been proven to be able to measure technology acceptance. Factor that determines someone using a mobile payment service is technology security (Oliveira et al., 2016). Security is an individual's belief in a technology to provide appropriate information. It is means that security is one of the decision-making points that used technology (Yoebrilianti et al., 2022). Consumers feel a lack of trust in a new technology because they feel they have a risk when using it, therefore this becomes an obstacle for someone to adopt m-payment (Lwin et al., 2007) and in general m-payment consumers prefer payment systems that have technological security by ensuring integrity, confidentiality and not acknowledging their transactions (Matemba and Li, 2018).

Most m-payment users do not have sufficient experience with new electronic services and consumers find it difficult to evaluate digital services so that they feel that the technology has a greater risk (Melorose et al., 2015). Consumers will use payment as a means of financial transactions if m-payment technology can make them feel safe (Oliveira et al., 2016). For example, individuals feel that the system offered by m-payment is safe, so every transaction must use a pin code and cannot make transactions except with the appropriate pin code. Based on previous research from (Garrett et al., 2014 and Huddin, 2019) technology security has a positive and significant effect and plays an important

role as a determinant of satisfaction with using m-payments. That opinion supported by previous research which found that technology security have a positive attitude towards mobile payment (Singh et al., 2017). Based on this explanation, the following hypothesis;

H$_1$: Technology security has a positive effect on mobile payment satisfaction

Ease of Use to Satisfaction of Mobile Payment

One of TAM model is the ease of use. This means that users believe that using the information communication system will improve their performance. The assumption is that if the user believes that the system is useful, then they will use it, but on the other hand, if they don't believe that it is useful, the answer will definitely not use it perceived ease of use is the degree to which a person believes that if he uses a certain system, the user will be free from tiring effort or effort (Ajzen and Fishbein, 2007). Ease of use is a condition where consumers can use technology easily without spending a lot of sacrifices (Huddin and Masitoh, 2021). Consumers tend to be more interested in using a technology when they feel that its use is easy and does not require costs but gets maximum benefits.

The expected mobile payments for the user are to be not confusing to operate, easy to operate, and having simple transaction procedures. This convinience can be seen from the use of the m-payment system which is easy, uncomplicated, clear and easy to make payment transactions (Chung, 2019). Covid 19 familiarizes us with social restrictions and physical contact restrictions, encouraging the use of m-payment services to be more convenient to use so as to anticipate the spread of the covid-19 virus. Thus, the researcher believes that convenience is a determining factor for someone's satisfaction to use m-payment after the Covid-19 pandemic. Similar previous researchers stated that ease of use had a positive effect on satisfaction (Liao and Cheung, 2008 and Huddin, 2019) explaint that ease of use has a positive effect on mobile payment satisfaction. Based on this explanation, the following hypothesis is proposed.

H$_2$: Ease of use has a positive effect on mobile payment satisfaction.

Usefulness to Mobile Payment Satisfaction

Usefulness defined as capable of being used advantageously, or can be used for profitable purposes. The principle of usefulness is the benefits that individuals believe can be obtained when using mobile payment. A number of studies show that perceived usefulness is a strong factor in user acceptance behavior in TAM model (Ajzen and Fishbein, 2007). Usefulness is a condition that describes the value that consumers feel that the technology can provide the way they achieve their goals (De Luna et al., 2019). This is in line with previous research which says that the perception of usefulness emphasizes the usefulness of using technology which is expected to increase productivity. When consumers feel a technology is useful for their lives, they tend to encourage them to use it. In the context of m-payment, the usefulness of this service can be seen from the use of the m-payment system which makes it easy during the Covid-19 pandemic because when making

transactions, you don't have to contact directly but use an application. In addition, m-payment can make the payment transaction process effective and efficient and can also increase consumers decisions in making purchasing a product or service.

Therefore, the use of technology becomes an important factor in encouraging consumer interest and satisfaction in using m-payments during the pandemic and post-Covid-19. This is in line with previous research that usefulness has a positive influence on satisfaction of using technology (Huddin, 2019). Based on the results of research conducted by Liao and Cheung (2008) its explaind that usefulness is the main determinant that positively impacts user satisfaction and intention towards technology payment.

H₃: Usefulness has a positive effect on mobile payment satisfaction

Continuous Improvement to Mobile Payment Satisfaction

Continuous improvement is a way to improve service quality that will be felt by consumers. In the context of m-payment, the use of technology as a medium is deemed necessary to constantly evaluate the technology used, where technology is constantly changing very rapidly so that innovation and continuous service expansion are needed to keep up with the needs and demands of consumers (Liao and Cheung, 2008). M-payment management should at least pay more attention to the quality of m-payment because there are still many consumers who consider it normal. Designs should be made more attractive, for example by using bright colors, and make the appearance more unique and innovative so that it adds to the characteristics of an m payment. This is continuously carried out in order to attract the attention of consumers when using m-payment services.

Lee et al. (2006) define continuous improvement as a dynamic process, focusing on improvement programs which are also related to other organizational elements in the organization's environment and technology. Adoption of management certification builds a culture of continuous improvement to improve operational performance and deliver products and/or services efficiently and effectively (Huddin, 2019). Continuous improvement as a stage of quality improvement program needs to be carried out continuously by management in order to achieve the expected quality which will later provide satisfaction to consumers. This is in line with previous research that continuous improvement has a positive effect on satisfaction with technology use (Lee et al., 2006; Liao and Cheung, 2008; Huddin, 2019). Based on this explanation, the following hypothesis is proposed:

H₄: Continuous improvement has positive effect on m-payment satisfaction

Satisfaction Affects the Trust in Mobile Payments

Satisfaction occurs when customer expectations are met by satisfying what they want (Oliveira et al., 2016). Customer satisfaction is an emotional reaction of consumers after making a transaction or purchase which can be in the form of dissatisfaction, anger, irritation, pleasure. Customer satisfaction is part of the level of customer feelings after comparing the perceived service performance with the desired expectations. Customer satisfaction is a post-purchase evaluation or evaluation result after comparing what is felt with expectations (Kotler, P., and Keller, 2016).

Customer satisfaction assessment recommends the use of assessing from all aspects not only evaluating customer satisfaction from the service side, but also the components of service process and improving payments (Oliveira et al., 2016). Customer trust can be fulfilled through customer satisfaction so that customers will continue the transaction if they are satisfied with m-payment in making transactions. Customer satisfaction will be fulfilled if they get what they want, so it will increase the level of customer satisfaction. This is in line with research conducted by (Mariska and Shihab, 2016 and Huddin, 2019) which shows that customer satisfaction has an effect on the trust obtained after making a transaction. Mariska and Shihab (2016) stated that customer satisfaction has a significant effect on customer trust. Customer satisfaction is an attitude that is based on the customer's past experience that supports the development of the trust felt by the customer to the company. Based on this description, the following hypothesis is proposed;

H$_5$: Satisfaction has a positive effect on trust in mobile payments.

Research Methode
Types of Research

In general, scientific research there are two approaches that are often used, namely quantitative and qualitative methods. Types of this research is a quantitative method usually used to examine researchers explaining how one variable affects other variables. In quantitative research, research uses raw data in the form of numbers which are then processed using statistics, and then conclusions are drawn from hypotheses.

Population and Sample

The population in this study are users of mobile payment services, especially the Shopee pay, LinkAja, Dana, OVO, and Gopay applications in Indonesia. This study uses a purposive sample with reference to the respondent selection with criteria (Cooper and Schindler, 2014) having mobile payment application during the COVID-19 pandemic. Therefore, the respondent will be asked the following screening question: "Did you payment with mobile application during the COVID-19 pandemic?". If you answer "Yes", then you can answer the next question and become a respondent in this study. Otherwise, if you answer "No", then you will not be a respondent. This study uses a sample were distributed online survey with 320 responden, the remaining 7 questionnaires were excluded because the respondents did not meet the criteria. So the sample in this study is 317 respondents could be used for analysis purposes.

Data Analysis Technique

The data in this study were analyzed using the structural equation model (SEM) method with AMOS 23 software. After the data has been collected, the next step is to test the validity and reliability. Validity is the accuracy or accuracy of an instrument in measurement. While the reliability test is used to determine the consistency of the measuring instrument, whether the measuring instrument used is reliable and remains consistent if the measurement is repeated. If it passes, then the research test model structural tested by looking at the goodnees of fit model. After meeting the criteria, the hypothesis is tested (Hair et al., 2009).

Measurement

This study has 6 variables measured using a 5-point likert a range from strongly disagree (1) to strongly agree (5). Operational definition of technology security is describing conditions that can guarantee and provide a sense of security in using mobile payment services with the aim of minimizing their concerns,measurement in this study adopts the four statement items from Johnson et al., (2018) and De Luna et al., (2019). Ease of use definition operational is describing the ease of using mobile payment services consists of four statement items from De Luna et al., (2019). The operational definition of usefulness is the benefits offered by the m-payment service. Usefulness measurement consists of five items from De Luna et al.,(2019). Operational definition of continuous improvement is the perceived improvement of a payment service provider. Continuous improvement five statement measurement items adopted by Liao and Cheung (2008). The operational definition of satisfaction describes the condition of a person's satisfaction with mobile payment services during the Covid-19 pandemic. And the last operational definition of trust is the condition of a person who believes that payment services are safe to use. Measurement satisfaction and trus consists of five items from Oliveira et al., (2016) and Huddin (2019).

Result and Discussion

Characteristic Responden

Characteristic respondents which amounts 317 dominated by as 210 or 66.3 percent were female, while the male respondents are 107 respondents or 33,7 percent. By age, respondents were dominated the age of 21-35 years as many as 186 or 58,6 percent, followed by 85 people aged 35 years or 26,9 percent and under 20 years as many as 46 or 14,5 percent. Based on their residents, the respondents dominated by Banten Province or 45,7 percent, then Jabodetabek with 93 or 29,3 percent respondents, Java with 57 respondents or 18 percent, and Outside Java (Sumatra, Sulawesi Kalimantan and Papua) which 22 respondents or 7%. The m-payment application used respondet are dominated by Shopee pay user 123 respondent or 38,9 percent, followed by Gopay with 82 respondents or 25,9 percent, DANA with 50 respondent or 15,7 percent, OVO with 34 or 10,7 percent, LinkAja with 20 respondent or 6,3 percent ,and Jenius with 8 respondent or 2,5 percent.

Validity Test and Reliability Test

Researchers conducted content validity by submitting statement items that have been translated and discussed with marketing experts. The next step in testing the validity, researchers use convergent validity and discriminant validity. The results of the factor analysis output are loading factor value of each question item or latent variable indicate that the perceived value is greater than 0.4 means that it has met the convergent validity requirements in SEM analysis so that the next stage can be carried out. After testing the validity, then the next stage is to test the reliability. Hair *et al.*, (2009) reliability as a measure of internal consistency and variance extracted from each construct so that very high reliability results provide confidence that the indicators used are all consistent with their measurements at recommended level of 0.7. The reliability measure used is construct reliability as follows:

Table 1. Reliability Test Results

Variable	Conctruct Reliability
Technology Security	0,72
Ease to Use	0,84
Usefulness	0,81
Continuous Improvement	0,77
Satisfaction	0,82
Trust	0,74

Source: Processed data (2022)

In this study, all research variables are stated reliable with a Conctruct Reliability value equal to or above 0.7 so that they are declared reliable.

Structural Modeling

The results of the goodness of fit value evaluation have Chi-Square (x2) criteria to develop and test a model that fits the data. In this test, a low x2 value and a significance level greater than 0.05 The x2 value in this study is 2696.9 with a probability of 0.0 indicating that the proposed research model is acceptable. The Normed Chi-Square (CMIN/DF) value in this model is 7.955 indicating that this research model has a fairly good level of conformity, the goodness of fit index (GFI) value which is close to 1 conformity with a GFI value of 0.653. The AGFI value in this model is 0.585 indicating that the model is considered adequate. The proposed model shows a good level of conformity with the tucker lewis index (TLI) value of 0.526. Comparative fit index (CFI) in the range 0 to 1. A value close to 1 indicates the model has a good level of conformity the CFI value of 0.575 indicates that this model has a fairly level of conformity. The value of The root mean square error of approximation (RMSEA) model of 0.148 indicates a fairly level of conformity (Hair et al., 2009).

Hypothesis Test

Hypothesis testing is carried out by observing the p-value <0.05 so that it can be concluded that all hypotheses are accepted and proven to have a significant effect, as can be seen from the SEM AMOS 23 output table as follows:

Page | 1371

Jurnal Riset
Akuntansi dan
Bisnis Airlangga
Vol. 7 No. 2
2022

Table 2. Hypothesis Test Results

Regression Weight			Estimates	S.E.	C.R.	P	Information
Satisfaction	←	Ease to Use	1,032	0,344	2,997	0,003	Significant
Satisfaction	←	Usefulness	0,805	0,261	5,409	***	Significant
Satisfaction	←	Continuous Improvement	0,708	0,161	4,401	***	Significant
Satisfaction	←	Technology Security	0,548	0.105	5,208	***	Significant
Trust	←	Satisfaction	0,605	0,102	5,930	***	Significant

Source: Processed data (2022)

It can be seen that all variables have a significant effect because they have a p value <0.05, so it can be concluded that all hypotheses are accepted. The path that has been built based on the theory and the development of the previous hypothesis can be seen in Figure I.
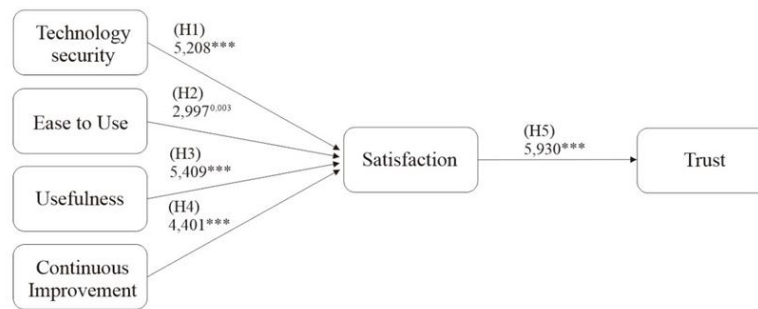
Figure 1. Models Hypotheses and Research Results
Source : Researcher Analysis

Research Findings and Their Implications
Technology Security to Mobile Payment Satisfaction

The results of this study indicate that technology security has a positive effect on payment satisfaction, so hypothesis 1 is **supported**. The security offered by the m-payment service is a major consideration for individuals to use it. Consumer will be more satisfied in making mobile payments because m-payment consumers prefer payment systems that have technological security and ensure the integrity, confidentiality of their transactions (Matemba and Li, 2018).

This research is in line with the TAM model will be able to explain why the information system used is accepted or not by the user. Factor that determines someone using a mobile payment service is technology security (Oliveira et al., 2016). The security aspect can ensure that m-payment technology can be trusted when conducting financial transactions (Oliveira et al., 2016). The post-Covid-19 m-payment service has provided a sense of security such as secure payment transactions, the use of codes for each transaction and users do not need to make physical contact during the transaction. This makes individuals feel safe doing financial transactions because it can protect their every financial transaction, personal information and transmission of the virus. Due to the increasing use of these services during the Covid-19 pandemic, there will be a lot of personal data of users, increasing the possibility of hacking and fraud. Therefore, m-payment service providers must provide safe, fast and effective services for their users (Ikhsan, 2020). Payment service providers such as ShopeePay Gopay, DANA, OVO, and LinkAja, Jenius must increase the sense of security for users as a way to attract consumers' attention during the COVID-19 pandemic.

However, this research is in line and strengthens research results from Singh et al. (2017) technology security have a positive attitude towards mobile payment because relatively the same responden sample and the conduct of research that represents equal conditions demographics. Research conducted in India, the country is still developing the same as Indonesia. The results show that in India mobile payments are experiencing significant growth. Trends confirms that, once they start using it, they continue to use it wherever they can because of the satisfaction with mobile payments.

This research is different from the research conducted by Pakarti and Rofiah (2019) and Zaipin and Sunyoto (2012), which state that technology security does not significantly affect customer satisfaction. Research conducted Pakarti and Rofiah (2019) examines Generation Z payment users who still have unstable emotions. While the research conducted by Zaipin and Sunyoto (2012) when the security of technology was still low condition in 2012, the respondent's perception of technology had no effect on satisfaction.

Ease of Use to Mobile Payment Satisfaction

The results of the study show that ease to use has a positive effect on mobile payment satisfaction, so hypothesis 2 is **supported**. When the use of m-payment services requires a lot of sacrifaction and effort that must be expanded by potential users, they tend not to use it (Johnson et al., 2018). Therefore, the ease of use of m-payment becomes an attraction for users and can be a barrier when its use makes it difficult for them. The m-payment service is an alternative method of payment other than using cash or bank cards, so it is important for consumers to be able to see and feel that m-payment is an easy technology to use (Johnson et al., 2018). This proves that payment transactions made are safer and easier so that consumers feel calm when making transactions during the Covid19 pandemic and continue to post the Covid 19 pandemic.

This result in line with TAM with the explaint that ease to use making someone use technology, users believe that using the information communication system will improve their performance. The assumption is that if the user believes that the system is useful, then they will use it, but on the other hand, if they don't believe that it is useful, the answer will definitely not use it perceived ease of use is the degree to which a person believes that if he uses a certain system, the user will be free from tiring effort or effort (Ajzen and Fishbein, 2007). However this study strengthens the research conducted by Liao and Cheung (2008) and Huddin (2019), explaint that ease of used has a positive and significant effect and plays an important role as a determinant of satisfaction with using m-payments. Therefore, consumers prefer and are motivated to use m-payments because it does not complicate and makes it easier than using cash and through banking services

Based on this study results, contradic with research by Chandra (2019) and De Luna et al., (2019), found that ease of used had not significant effect on satisfaction with mobile payment payments. This research is different because the context research by Chandra (2019) paying taxes, so people are reluctant to use technology even though it is easy of used. In De Luna et al., (2019) research not all mobile payments are the same can be used easily to make payment transactions, when the mobile payment cannot be ease to used transactions so it does not satisfaction consumers.

Usefulness to Mobile Payment Satisfaction

The results of this study explain that usefulness has a positive effect on mobile payment satisfaction, so hypothesis 3 is **supported**. Usefulness offered by the m-payment service is one of the considerations in using m-payment (Ikhsan, 2020). If a service is able to make the payment process easier, safer and faster then

the consumers will be more satisfied with the service. Therefore, the value of the usefulness can be an attraction for consumers when using it as a suitable payment tool during the Covid-19 pandemic and m-payment technology provides benefits in completing their transaction needs (Liao and Cheung, 2008).

This research is in line with TAM explaint perceived usefulness can be used for profitable purposes. The principle of usefulness is the benefits that individuals believe can be obtained when using mobile payment it is making strong factor in user acceptance behavior (Ajzen and Fishbein, 2007). This research also supports Liao and Cheung (2008) usefulness has a positive effect on mobile payment satisfaction, because when consumers feel a technology is useful for their lives, they tend to encourage them to use it. In the context of m-payment, the usefulness of this service can be seen from the use of the m-payment system which makes it easy during the Covid-19 pandemic. In addition, m-payment can make the payment transaction process effective and efficient and can also increase consumers decisions in making purchasing a product or service.

Based on this study results, there are different results from Ghofar and Mardiati (2019) research because the hypothesis built is not supported. The reason is that research was conducted on an accounting application, namely Zahir Application, so that many people think that it is difficult to understand accounting when the respondent is not an accountant, even though the application has usefulness, but it still has no effect on satisfaction. Another cause is respondents are only a sample size of 100 respondents this allows for bias due to too small a sample size.

Continuous Improvement to Mobile Payment Satisfaction

The results of this study indicate that continuous improvement has a positive effect on mobile payment satisfaction, so hypothesis 4 is **supported**. Continuous improvement must always be carried out by all industries including m-payment service providers. Improving service quality and evaluating existing problems in the field create added value, especially with the development of technology. Evaluation of improvements can be done regularly either internally or externally. In the context of m-payment, the use of technology as a medium have to be evaluated, where technology is constantly changing very quickly so that innovation and continuous service expansion are needed to keep up with the needs and demands of consumers (Lee et al., 2006).

M-payment management should at least pay more attention to the quality of m-payment because there are still many consumers who consider it normal. Designs should be made more attractive, for example by using bright colors, and make the appearance more unique and innovative so that it adds to the characteristics of an m-payment. This is done continuously in order to attract the attention of consumers when using m-payment services.

The results in line with research conducted by Liao and Cheung (2008) with the results of research that improvements in payment technology affect payment transactions and consumer satisfaction. The research also supports Huddin (2019) research which illustrates that continuous improvement in banking services has a positive impact on customer satisfaction. This study supports

Page | 1374

Jurnal Riset
Akuntansi dan
Bisnis Airlangga
Vol. 7 No. 2
2022

previous research because it is rare for improvements related to do not effect on satisfaction, indeed any service provider should always improve quality so that consumers will be loyal.

Reseach findings of this study answer the phenomenon that exists in the Indonesian context where mobile payment service providers are indeed required to continuously improve in all aspects quality. If the mobile payment industri following technological developments that are constantly changing consumers do not want to be abandoned switch to another service payment, so that consumers feel satisfied if the payment service is always up to date. Continuous improvement indirectly payment service provider strategy in attracting Indonesian consumers who always follow trends and demand satisfaction, in this study finds consumers feel happy when complaints are responded and find solutions, consumers also will be satisfied if service providers always update the features of mobile payment services.

Satisfaction to Trust of Mobile Payment

The results of this study indicate that satisfaction has a positive effect on mobile payment trust, so hypothesis 5 is **supported**. ShopeePay Gopay, DANA, OVO, and LinkAja, Jenius must continue to improve customer satisfaction so that it will lead to consumer confidence to continue using the service even though the covid 19 pandemic has ended. Consumers feel satisfied when customer expectations are met by satisfying what they want (Oliveira et al., 2016). Customer satisfaction is part of the emotional reaction of consumers after making a transaction or purchase which can be in the form of dissatisfaction, anger, irritation, pleasure or joy (Norhermaya, 2016).

The results of this study are in line with research conducted by Norhermaya (2016) explained that when someone makes an online purchase transaction through the Lazada application if consumer satisfied, this satisfaction will affect the trust in repuschase and using the application regularly. The results of this study support Mariska and Shihab (2016) with the result consumers are served well, consumers will feel satisfied which will lead to a sense of trust to reuse the services offered where their research shows that consumer satisfaction has a positive effect on consumer trust. This study supports previous research because customer trust can be fulfilled through customer satisfaction so that customers will continue the transaction if they are satisfied with mobile payment in making transactions. Customer satisfaction will be fulfilled if they get what they want, so it will increase the level of customer satisfaction.

Phenomenon in the Indonesian context when someone is satisfied with the services provided in accordance with their expectations and even exceeds them, the consumer will believe in the services offered, but on the contrary, when they are not satisfied, they will not believe in using them again. In one of the trust indicator questions asked that "I accept the consequences of mobile payments" when consumers are satisfied then consumers will be willing to do anything including with certain consequences but they are sure that nothing will happen. Or another statement "I will provide the information needed for mobile payment payments". Consumers of payment services in Indonesia tend to provide any information if the service provider really gives satisfaction to what consumers expectation.

Conclusion

That results confirmed that technology security has a positive effect on mobile payment satisfaction, ease of use has a positive effect on mobile payment satisfaction, usefulness has a positive effect on mobile payment satisfaction, continuous improvement has a positive effect on mobile payment satisfaction, and furthermore satisfaction has a positive effect on the trustworthiness of mobile payments after pandemic Covid 19 in Indonesia.

Limitation

There are two main limitations in this study. First, this research was conducted in Indonesia, but due to limited distribution and time, it was only carried out once, so it only obtained a few respondents who were outside the island of Java, therefore it was felt that they had not properly captured all changes in behavior that occurred in mobile payment application users during the COVID-19. Both of these studies were only carried out using a survey method through questionnaires so that researchers could not control the respondents' answers, where responses where respondents could be dishonest and possible responses were biased in answering let alone using online surveys using Google Form. Based on this, the research also cannot capture interesting information that can be studied more deeply.

Suggestion

The advice that can be given from the results of this study is that mobile payment service providers are expected to continuously improve features that provide security, convenience and benefit to their users to conduct financial transactions. First, further research is recommended to use a mix method qualitative and quantitative. Qualitative methods to obtain more detailed and in-depth information regarding the use of post-COVID-19 and quantitative payment services with a wider survey spread and representing all regions in Indonesia in order to obtain a more perfect picture of research results. Second, further research can add variables that affect a person's attitudes, intentions and satisfaction which in this study only 4 variables so that they can explore other factors that determine a person's satisfaction in using mobile payment services.

Implication

The results of this study can be used as recommendations for mobile payment service providers to making consumers satisfaction with mobile payement. Especially related to research variables that all variable has a positive effect on mobile payments, namely always to improve technology security so that consumers feel safe in conducting transactions, providing ease of use and usefulness of consumers whenever and wherever they are, always continuous improvements in all aspects including following technological developments and adaptability with the hope, when this is done service users will feel satisfied and will continue to believe in using mobile payment. The implication of the results of this research for consumers are to use applications that provide security, ease to use and usefulness

and always provide improvements to their services so that they are appropriate to the needs of increasing financial transactions. The researchers also thank the Indonesian Ministry of Education, Culture, Research and Technology for providing funding for the 2022 research grant with a contract number 156/E5/PG.02.00.PT/2022 date 2022-05-10.

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