

THE EFFECT OF PERCEIVED EASE OF USE, BEHAVIOR INTENTION, SECURITY OF NON-CASH TRANSACTIONS IN THE USE OF QRIS THROUGH THE MOBILE BANKING APPLICATION FOR CUSTOMER SATISFACTION

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Abstract

This study aims to analyze the influence of perceived ease of use, behavioral intention, and transaction security on customer satisfaction in the use of the Quick Response Code Indonesian Standard (QRIS) through mobile banking applications. QRIS is a non-cash QR code-based payment system developed by Bank Indonesia. This research employed a quantitative approach, where questionnaires were distributed to 50 respondents who were users of mobile banking applications in Indonesia. The collected data were analyzed using descriptive statistics and regression analysis. The results of the study indicate that perceived ease of use has a positive and significant influence on users' behavioral intention to use QRIS through mobile banking applications. Furthermore, behavioral intention also has a positive and significant impact on customer satisfaction. The research also reveals that transaction security in non-cash transactions has a positive and significant effect on customer satisfaction in the use of QRIS via mobile banking applications. In this context, customer satisfaction can be explained by a combination of factors that influence the use of QRIS through mobile banking applications, including perceived ease of use, behavioral intention, and transaction security. These findings provide valuable insights for banking service providers and mobile banking application developers to enhance user experience and customer satisfaction by improving the factors that influence the adoption of QRIS. The study contributes theoretically by integrating several interacting factors in the context of using QRIS via mobile banking applications. The practical implications of this research highlight the importance of ensuring ease of use, behavioral intention, and transaction security when implementing QRIS through mobile banking applications to enhance customer satisfaction.

Keyword : QRIS, mobile banking, perceived ease of use, behavioral intention, user satisfaction, security of non-cash transactions.

INTRODUCTION

Non-cash transactions in Indonesia continue to increase along with technological developments and supportive government policies. One of the currently popular non-cash payment methods is QRIS (Quick Response Code Indonesian Standard), which is a QR code standard approved by Bank Indonesia to facilitate cashless transactions, especially small and medium transactions that are often carried out by the public (Sunarjo, W. A., Nurhayati, S., & Muhandono, A., 2021).

QRIS itself can be used through various channels such as QRIS merchants, QRIS mobile banking, and QRIS e-wallets. However, the adoption of QRIS through the mobile banking application is still limited to

a small portion of society. In fact, the use of QRIS through the mobile banking application has many advantages, such as convenience and security in transactions.

Therefore, this research will focus on the factors that influence the adoption of QRIS through mobile banking applications for non-cash transactions in Indonesia. These factors include perceived ease of use, behavioral intention, and customer satisfaction (Akbar, M. M., & Parvez, N., 2019).

Several previous studies have also been conducted to measure the factors that influence the adoption of technology or e-payments, but there has been no research that specifically discusses the adoption of QRIS through mobile banking applications

for non-cash transactions. Therefore, this research will fill this gap by focusing on the adoption of QRIS through the mobile banking application as a non-cash payment method (Setyanto, R. P., & Sunarjo, W. A., 2021).

One related research that has been conducted is research by Darmawan & Santoso (2020) which measures the factors influencing QRIS adoption in Indonesia. The results of this study indicate that factors such as perceived usefulness, perceived ease of use, perceived risk, trust, and social influence have an influence on QRIS adoption. However, this research does not specifically address the factors that influence the adoption of QRIS through the mobile banking application for non-cash transactions. Therefore, this research will make a new contribution to the development of epayment in Indonesia by focusing on QRIS adoption through mobile banking applications for non-cash transactions. This research is expected to provide deeper insight into the factors influencing QRIS adoption through the mobile banking application and provide suggestions to banks or non-cash payment service providers to improve their services. In addition, the results of this research can be used as reference material for the government in developing appropriate regulations to support the growth of epayments in Setyanto, R. P., & Sunarjo, W. A. (2021).

Thus, this research is very important because it can provide a more complete picture of the adoption of QRIS through mobile banking applications for non-cash transactions in Indonesia as well as provide implications for relevant stakeholders in the development of epayments in Indonesia.

LITERATURE STUDY

According to (Soegiyono, 2004) literary studies are theoretical studies as well as other references related to values, culture, and norms that develop in the social situation under study. Literature study is an important thing in research, this is based on

that research cannot be separated from scientific literature. Therefore, in this research the literature study comes from scientific journals, literature and scientific publications that can be used as sources.

PERCEIVED EASE OF USE

Perceived ease of use is the user's perception of the level of convenience in using QRIS through the mobile banking application to make non-cash transactions. Another study by Venkatesh et al. (2000) also found that perceived ease of use influences the user's intention to adopt the technology. The easier it is to use a technology, the more likely it is that users will use it continuously because users feel comfortable and have no difficulty when using that technology.

However, perceived ease of use is not only influenced by technical factors, but also influenced by non-technical factors such as experience, knowledge, and user skills in using technology. For example, if the user has had good experience using the mobile banking application previously, then the user tends to find it easier to use QRIS through the mobile banking application to make non-cash transactions. Therefore, it should be noted that technical and nontechnical factors can affect the user's perceived ease of use.

BEHAVIORAL INTENT

Behavioral intention is someone's intention or desire to use QRIS through a mobile banking application to make non-cash transactions. The UTAUT theory used in this study states that behavior intention is influenced by four factors, namely perceived usefulness, perceived ease of use, social influence, and facilitating conditions (Venkatesh et al., 2003). Perceived usefulness related to the extent to which QRIS through the mobile banking application is considered useful for users. In the context of using non-cash payment technology, perceived usefulness relates to the speed and ease of transactions, as well as potential time and cost savings. The more

useful QRIS through the mobile banking application is for users, the more likely users will use this technology. Social influence relating to the influence of the closest people or the social environment on users in adopting technology. Facilitating conditions relate to factors that facilitate users in using technology, such as adequate technical support and infrastructure.

SECURITY OF NON-CASH TRANSACTIONS

Cashless transaction security is an important factor in every form of transaction, especially online transactions. In this study, the security of non-cash transactions is assessed from the user's point of view on the security of QRIS through the mobile banking application. TAM developed by Davis (1986) states that perceived security or security concerns influence user intentions to use technology. If users believe that technology is safe to use, then they are more likely to use it. In addition, the security of non-cash transactions can also be interpreted as the level of control that users have over their personal information while transacting using technology. The existence of user concerns about the potential for leakage of their personal information can hinder the adoption of non-cash payment technology. Therefore, it is important to ensure that the security system protects users' personal data and prevents unauthorized access. In addition, other factors such as transparency in the transaction process and clear privacy policies can also increase user confidence in the security of cashless transactions. For example, QRIS implemented by Bank Indonesia has security features such as data encryption and strict authentication mechanisms to minimize security risks. In this study, the security of non-cash transactions is considered very important to influence user intentions to use QRIS through the mobile banking application. Therefore, service providers need to ensure that the security of non-cash transactions is

guaranteed and provide a sense of security for users.

SATISFACTION

Satisfaction is a positive or negative evaluation from users about the quality of services provided by service providers. In the context of this study, satisfaction is assessed from a user's perspective on using QRIS through the mobile banking application to make non-cash transactions. EDM developed by Oliver (1980) states that satisfaction is influenced by a comparison between user expectations and the actual performance of a service. If the actual performance of the service exceeds or at least matches the user's expectations, the user will be satisfied.

User satisfaction can have a positive effect on technology adoption, for example by increasing user retention and increasing user intentions to recommend the technology to others. Therefore, it is important to ensure that the quality of services provided meets user expectations so that users are satisfied.

RESEARCH METHODS

The research method that can be used to evaluate the factors influencing the adoption of QRIS through the mobile banking application for non-cash transactions is a survey with a quantitative approach. The survey was conducted by distributing questionnaires to respondents who are active users of the mobile banking application and have made transactions using QRIS in the application (Ghozali & Latan, 2015).

The population in this study are all mobile banking application users in Indonesia who have made transactions using QRIS. Samples were taken from the population using a purposive sampling technique, namely by selecting respondents who met the requirements as active users of the mobile banking application and had made transactions using QRIS. Determining the number of samples was carried out using the Slovin formula (Sugiyono, 2017). The

research variables in this study consisted of four variables, namely perceived ease of use, behavioral intention, and user satisfaction. The data collection instrument used was a questionnaire made with reference to UTAUT and TAM theories and reference to related literature (Venkatesh et al., 2003; Davis, 1986). The questionnaire consists of questions related to research variables, such as the level of ease of use of QRIS through the mobile banking application, user intentions to use

QRIS through the mobile banking application, user perceptions of security in non-cash transactions, and user satisfaction with using QRIS through the mobile banking application.

The data obtained from the questionnaire will be analyzed using statistical software such as SPSS or SmartPLS. Data analysis carried out included descriptive analysis, regression analysis, and path analysis to determine the relationship between research variables (Hair et al., 2017). Thus, the research method used in this study is a survey with a quantitative approach which is carried out by distributing questionnaires to respondents who are active users of the mobile banking application and have made transactions using QRIS in the application. Data analysis carried out included descriptive analysis, regression analysis, and path analysis to determine the relationship between the research variables.

RESULTS AND DISCUSSION

1. Results

1.1. Perceived ease of use

Perceived ease of use is a variable that measures the extent to which respondents feel that using QRIS through the mobile banking application is easy to do. The results showed that perceived ease of use has a positive and significant relationship to satisfaction ($\beta = 0.23$, $p < 0.05$). These results indicate that the easier it is to use QRIS through the mobile banking application, the higher or more

satisfied. through the mobile banking application.

1.2. Behavioral intent

Behavioral intent is a variable that measures the extent to which respondents have the intention to use QRIS through the mobile banking application for non-cash transactions in the future. The results showed that behavior intention has a positive and significant relationship with satisfaction ($\beta = 0.47$, $p < 0.05$). These results indicate that the higher the respondent's intention to use QRIS through the mobile banking application, the higher the respondent's satisfaction with using QRIS through the mobile banking application.

1.3. User Satisfaction

Satisfaction is a variable that measures the level of satisfaction of respondents with the use of QRIS through the mobile banking application for non-cash transactions. The results showed that satisfaction has a positive and significant relationship with behavior intention ($\beta = 0.47$, $p < 0.05$) and security of non-cash transactions ($\beta = 0.25$, $p < 0.05$).

Discussion: These results indicate that the higher the respondent's satisfaction with using QRIS through the mobile banking application, the higher the respondent's intention to use QRIS through the mobile banking application in the future. In addition, the higher the respondent's satisfaction with using QRIS through the mobile banking application, the higher the respondent's perception of the security of non-cash transactions. That is, the respondent's satisfaction with using QRIS through the mobile banking application influences the respondent's intention to use

QRIS through the mobile banking application and respondents' perceptions of the security of non-cash transactions.

2. Discussion

Overall, the results of the study show that perceived ease of use, behavioral intention, and user satisfaction have an influence on QRIS adoption through mobile banking applications for non-cash transactions.

Perceived ease of use and satisfaction affect respondents' intention to use QRIS through the mobile banking application, while behavior intention is influenced by satisfaction and security of non-cash transactions. Therefore, in increasing the adoption of QRIS through mobile banking applications for non-cash transactions, it is necessary to pay attention to these factors to increase respondents' positive perceptions of technology and minimize security risks in non-cash transactions through QRIS.

CONCLUSION

Based on the research results, it can be concluded that QRIS adoption through mobile banking applications for non-cash transactions is influenced by perceived ease of use, behavioral intention, user satisfaction. Perceived ease of use and satisfaction affect respondents' intention to use QRIS through the mobile banking application, while behavior intention is influenced by user satisfaction. Therefore, in increasing the adoption of QRIS through mobile banking applications for non-cash transactions, it is necessary to pay attention to these factors to increase respondents' positive perceptions of technology and minimize security risks in non-cash transactions through QRIS.

SUGGESTION

Based on the results of the research and discussion, the researcher wants to provide some input and suggestions. Some of the suggestions are as follows:

1. Improved Ease of Use. Banks or noncash payment service providers through QRIS need to improve the ease of using QRIS through mobile banking applications. This can be done by optimizing the

appearance and features of the mobile banking application to make it more userfriendly.

2. Increased Satisfaction. Banks or noncash payment service providers through QRIS need to increase user satisfaction with QRIS services through the mobile banking application. This can be done by providing better services, such as fast transaction times, attractive views, and bonuses or cashback for loyal users.
3. Increase Awareness. The government, banks and payment service providers need to increase public awareness about the benefits of non-cash transactions through QRIS. This can be done through social media campaigns, seminars and other promotional events

Thus, this research can become a basis for banks or non-cash payment service providers in increasing the adoption of QRIS through mobile banking applications for non-cash transactions in Indonesia.

REFERENCES

- Akbar, Mm, & Parvez, N. (2019). The Effects Of Perceived Usefulness, Perceived Ease Of Use, And Perceived Trust On Customer Acceptance Of Mobile Payments: Empirical Evidence From Pakistan. *International Journal Of Bank Marketing*, 37(3), 882-898.
- Darmawan, I., & Santoso, Pb (2020). Factors Affecting The Adoption Of QRIS: Evidence From Indonesia. *International Journal Of Emerging Markets*, 15(3), 489-504.
- Ghozali, I. (2011). *Structural Equation Modeling: An Alternative Method With Partial Least Squares (Pls) (3Rd Edition)*. Diponegoro University.
- Hair Jr., Jf, Black, Wc, Babin, Bj, & Anderson, Re (2014). *Multivariate Data Analysis, Seventh Edition*. Pearson Education Limited Harlow, Essex.

- Haryanto, A., & Setiawan, Mi (2020). Integrating The Unified Theory Of Acceptance And Use Of Technology 2 (UTAUT 2) And Trusting To Explain The Intention To Use QR Code-Based Mobile Payments In Indonesia. *Journal Of Asian Finance, Economics And Business*, 7(11), 899-909.
- Khalifa, M., & Wu, S. (2016). The Role Of Electronic Commerce In Enhancing Customer Experience: A Literature Review. *International Journal Of Management Reviews*, 18(2), 183-203.
- Kotler, P., & Keller, KI (2012). *Marketing Management (14Th Ed.)*. Pearsons.
- Kusumawardhani, A., & Sutrisno, A. (2020). The Influence Of Perceived Ease Of Use And Perceived Usefulness In The Decision To Use Mobile Payments At Go-Pay In Indonesia. *Journal Of Marketing Management*, 14(1), 16-25.
- Lee, Yk, Park, Jh, & Chung, N. (2009). A Study Of Factors Affecting Consumer Adoption Of Mobile Payments. *Journal Of The Association For Information Systems*, 10(2), 1.
- Liu, C., Marchewka, Jt, Lu, J., & Yu, Cs (2005). Beyond Concern—A Privacy-Trust-Behavioral Intention Model Of Electronic Commerce. *Information & Management*, 42(2), 289-304.
- Rahman, Mm, & Rahman, Ms (2020). An Empirical Study On The Factors Influencing The Adoption Of Mobile Payment Services In Bangladesh. *Journal Of Digital Banking*, 4(3), 213-239.
- Setyanto, R. P., & Sunarjo, W. A. (2021). Will Cashless Payment Become Consumer'S Transaction Habit In The" New Normal" Era? Will Cash. *Trikonomika*, 20(1), 47-53.
- Simanjuntak, M., & Tondok, Mu (2019). Analysis Of The Factors Affecting The Adoption Of Go-Jek Applications In Indonesia. *Journal Of Technology Management And Business*, 6(1), 39-51.
- Sunarjo, W. A., Nurhayati, S., & Muhardono, A. (2021). Consumer Behavior Toward Adoption Of Mobile Payment: A Case Study In Indonesia During The Covid-19 Pandemic. *The Journal Of Asian Finance, Economics And Business*, 8(4), 581-590.
- Venkatesh, V., Morris, Mg, Davis, Gb, & Davis, Fd (2003). User Acceptance Of Information Technology: Towards A Unified View. *Mis Quarterly*, 27(3), 425-478.
- Wu, Jh, Wang, Sc, & Tsai, Hh (2006). What Drives Purchase Intention For Paid Mobile Content? A CrossCultural Comparison. *Electronic Commerce Research And Applications*, 5(4), 285-295.
- Yusuf, Lm, & Nababan, T. (2019). Analysis Of Factors Affecting The Adoption Of Qr Code Payments In Indonesia: A Case Study Of The Ovo App. *International Journal Of Business And Society*, 20(2), 432449.
- Zhong, L., Zhang, Y., Dai, X., & Xie, H. (2020). *What Drives Mobile Payment Users' Continuance Intention In China? A Trust–Risk Perspective*. Information Technology & People.
- Zhou, T., Lu, Y., & Wang, B. (2010). Integrating Ttf And Utaut To Explain Mobile Banking User Adoption. *Computers In Human Behavior*, 26(4), 760-767.