The Role of Trust Mediates the Effect of Perceived Ease of use of Use and Perceived Risk on Intention to re-use QRIS Payment Methods

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Abstract---This study aimed to examine and explain the role of trust in mediating the effect of perceived ease of use and perceived risk on the intention to reuse the QRIS BPD Bali payment method. This research is associative quantitative research conducted in Denpasar City. Data consists of 150 samples, collected by distributing questionnaires containing open and closed questions and statements that have been tested for validity and reliability. The analysis technique used is the Structural Equation Model (SEM) using SmartPLS 3.2.9 software as an analytical tool. The results of this study indicate that the perceived ease of use has a positive and significant effect on the intention to reuse and the perceived risk has a negative and significant effect on the intention to reuse. Trust has a positive influence on the intention to reuse and can mediate the relationship between perceived ease of use and perceived risk on the intention to reuse the QRIS BPD Bali payment method in Denpasar City. The findings of this study provide empirical contributions, especially related to the Technology Acceptance Model (TAM) theory, which includes the perception of convenience, as well as other theories related to the perceived risk, trust, and intention to reuse payment methods, especially QRIS. One of the managerial implications of this research is that it can provide information to the management of Bank BPD Bali to get to know their customer's perceptions of the emergence of the QRIS feature which was just launched in the last two years or so.

Keywords---Technology Acceptance Model, Perceived ease of use, Perception Risk, Trust, Intention to Reuse, QRIS, BPD Bali.

Introduction

The TAM model is used as a model for the adoption of technology use. Perception of convenience is one of the constructs of the TAM model that determines the individual acceptance of information technology systems. In the context of using the QRIS payment method, users believe that QRIS is easy to use so that it does not require excessive effort and will be free from difficulties in making transactions. This perception can then predict a person's intention to continue using QRIS. Currently, there are various types of payment methods available for digital transactions. Users will look for the method that they feel most comfortable and easy to use. They will also tend to compare the new payment method with the payment method they are used to (Zhang et al, 2019).

It is undeniable that with the trend of digital payments, all transaction activities can be carried out anywhere and anytime without being limited, but apart from being viewed in terms of convenience, the general public will also think about the risks. Featherman & Pavlou (2003), define perceived risk in the context of technology use as the possibility of loss or loss when using technology. The perception of these losses can be an obstacle to decisions to use technology. QRIS is a payment method that has just been introduced, so it is likely that many users are not familiar with and still have a high perceived risk of QRIS.
The intention to reuse QRIS apart from the user's perception is thought to be caused by the user's trust factor. According to Hartono (2008), trust represents a cognitive structure developed by individuals after collecting and processing information about information technology, and includes individual assessments of the results related to the use of technology, so a technology provider needs to provide trust to its users (Odeleye, 2021). Trust in the context of the intention to reuse the QRIS payment method is an assumption that the QRIS payment method is a convincing technology so that it is still used in payment transactions (Huynh, 2020; Simon et al., 2000).

Based on the explanation above, it can be concluded that people's perceptions when using digital transaction services can affect their trust in service providers which can later lead to users' intention to reuse them. The study uses some of the core perceptions of the community that are considered capable of representing the reasons why people have or lack the intention to reuse QRIS. This study aims to discuss the effect of perceived ease of use and perceived risk on the intention to reuse the QRIS payment method, then the effect of trust on the intention to reuse the QRIS payment method, as well as examine the mediating variable, namely the influence of trust which can influence the relationship between perceived risk and perceived ease of use return the QRIS payment method. Perceived ease of use is defined as easy to make transactions using the QRIS payment method. Perceived ease of use is also a consideration to build trust that arises in the minds of users.

Previous research stated that the perceived ease of use affects trust such as mobile wallet applications (Chawla & Joshi, 2019; Saqib, 2019), mobile payment applications (Apidana et al., 2020), online food ordering applications (Cho & Sagynov, 2015; Kang et al., 2019), online transportation ordering applications (Subagio et al., 2018), e-commerce applications (Faradilla & Soesanto, 2016; Deborah & Keni, 2019). These results are because trust will arise when users feel the technology is easy to use and if users experience difficulties, users will lose trust in the technology.

H1: Perceived ease of use has a positive and significant effect on trust.

Perceived ease of use is stated to affect the intention to reuse various digital transaction applications such as mobile banking applications (Malaquias et al., 2018; Suhartanto et al., 2019; Apidana et al., 2020; Suryajaya, 2019; Bhaskara, 2020), applications mobile payment (Ozturk, 2016; Newman et al., 2017; Mun et al., 2017; Pipitwanichakarn & Wongtada, 2019), fintech applications (Singh & Srivastava, 2018) and e-wallet applications (Saqib, 2019; Prakosa & Wintaka, 2020; Ariana et al., 2020). These results can be interpreted that by using technology, users find it easier to use various financial services that have been digitized so that the intention arises to reuse them.

About the use of QRIS, it is suspected that the perceived ease of use influences the intention to reuse because based on previous research, users tend to continue to use technology that they feel is easy and uncomplicated, especially in making payment transactions. Based on the empirical study above, the following research hypotheses can be built:

H2: Perceived ease of use has a positive and significant effect on the intention to reuse

Perceived ease of use is stated to affect the intention to reuse various digital transaction applications such as mobile banking applications (Malaquias et al., 2018; Suhartanto et al., 2019; Apidana et al., 2020; Suryajaya, 2019; Bhaskara, 2020), applications mobile payment (Ozturk, 2016; Newman et al., 2017; Mun et al., 2017; Pipitwanichakarn & Wongtada, 2019), fintech applications (Singh & Srivastava, 2018) and e-wallet applications (Saqib, 2019; Prakosa & Wintaka, 2020; Ariana et al., 2020). These results can be interpreted that by using technology, users find it easier to use various financial services that have been digitized so that the intention arises to reuse them.

H3: Perceived risk has a negative and significant effect on trust.

Brahanta (2021), stated that perceived risk had a positive and significant effect on the intention to reuse the Shopeepay application, while other studies stated that perceived risk negatively and significantly affected the intention to reuse various digital transaction technologies such as mobile banking applications (Makanyeza, 2017; Poromatikul et al., 2019; Giovanis et al., 2018; Giovanis et al., 2019), online banking applications (Kaur & Arora, 2020), internet banking applications (Namahoot and Laohavichien, 2018) and mobile payment applications (Ozturk, 2016; Apidana et al., 2020). These results indicate that low perceived risk will lead to a high intention to reuse, and conversely a high perceived risk will cause a low intention to reuse.

Associated to reuse the QRIS payment method, it can be indicated that the perceived risk has a negative and significant effect on the intention to reuse because the higher the perceived risk, the lower the user's intention to
return to transactions with this feature, because QRIS can be categorized as a new payment method. so that users may not be familiar and still have thoughts about the high risk of using it.

**H4: Perceived risk has a negative and significant effect on the intention to reuse.**

Trust in technology use is defined as a person's willingness to use technology by accepting risks when using it, regardless of his ability to monitor and control the technology. Previous research stated that there was a significant influence of trust on a person's attitude toward adopting technology. Trust emerged as an important factor in determining user intentions to reuse technology such as in digital transaction applications including: mobile banking (Alalwan et al., 2017; Sharma et al., 2017; Shareef et al., 2018; Malaquias et al., 2018), mobile wallet (Kumar et al., 2018; Chawla & Joshi, 2019; Saqib, 2019), online banking services (Kaur & Arora, 2020), internet banking (Namahoot & Laohavichien, 2018), mobile payment (Phonthanukittaworn et al., 2015; Apidana et al., 2020) and e-commerce applications (Ghazali et al., 2018). These results indicate that in the context of digital transactions, trust is a person's belief that the other party has integrity and is trusted to fulfill all its obligations as expected (Nurrahmanto & Rahardja, 2015).

Regarding the use of the QRIS payment method, it is indicated that trust influences the intention to reuse QRIS in payment transactions. The type of service related to the financial aspect makes trust the main factor that affects the intention to reuse.

**H5: Trust has a positive and significant effect on the intention to reuse.**

Perceived ease of use of technology can lead to user confidence to reuse a technology. Previous research has stated that trust can mediate the relationship between perceived convenience and intention to reuse various technologies such as e-banking (Kharismawan & Widiyanto, 2016; Al-Sharafi et al., 2017; Saputri, 2018; Riyanto, 2018), e-commerce (Faradila & Soesanto, 2016; Sawitri & Giantari, 2020; Putri & Iriani, 2021), e-wallet (Saqib, 2019), online transportation ordering applications (Subagio et al., 2018; Nurlinda & Utami, 2014) and online shopping sites (Yudiarti & Puspaningrum, 2018). The results of the study identify the higher the perceived ease of use of technology, the trust will arise which causes a higher intention to reuse technology.

Contrary to research stated by Iqbal et al. (2018), Laora et al. (2021) and Safari (2021) where trust cannot mediate the effect of perceived convenience on intention to reuse technology for online shopping. The results of the study stated that the perception of convenience is not a factor that can encourage trust for users to reuse a technology.

Concerning the QRIS payment method, it is indicated that trust can mediate the relationship between perceived ease of use and the intention to reuse the QRIS payment method (Johnson & Grayson, 2005). The higher the convenience obtained from using QRIS, the trust will arise to use the method and cause the greater the intention to reuse the QRIS payment method.

**H6: Trust mediates the effect of perceived ease of use and intention to reuse.**

Low perceived risk of the use of technology can lead to user confidence to reuse a technology. Previous research stated that trust can mediate the relationship between perceived risk and intention to reuse various technologies such as e-banking (Jayantari & Seminari, 2018; Saputri, 2018), social media (Martinayanti & Setiawan, 2016), online shopping sites (Martinayanti & Setiawan, 2016; Arora & Sahney, 2017; Rizkitasari & Nugroho, 2017) and health applications (Wei et al., 2020). These results indicate that trust can mediate the relationship between perceived risk and intention to use technology because the presence of distrust can lead to higher perceived risks and affect the intention to reuse.

Contradicting research is stated by Nurlinda & Utami (2014), Prabowo (2019) and Mustika (2021), where trust is not able to mediate the effect of perceived risk to use. These results are obtained because users can prioritize other factors that make users override trust and risk. Associated to use the QRIS payment method, it is indicated that trust can mediate the effect of perceived risk on the intention to use the QRIS payment method, because the better the user's perception of risk, the trust in QRIS will increase and affect the intention to use the QRIS payment method.

**H7: Trust mediates the effect of perceived risk and intention to reuse**

**Methods**

The population of this study is a customer of Bank BPD Bali using a mobile banking application and domiciled in Denpasar City. The data of users of the Bank BPD Bali mobile banking application in Denpasar City cannot be accessed freely so due to these limitations the number of the study population cannot be predicted with certainty. The study used a non-probability sampling technique because the population is not known for its number of members. The criteria for determining the sample used are as follows:

1. Bank BPD Bali customers are domiciled in Denpasar City, Bali Province.
2. Bank BPD Bali customers who use BPD Bali mobile banking.
3) Bank BPD Bali customers who have used the QRIS mobile banking transaction feature of BPD Bali at least 1 (one) time in the last month.

In this research, which will conduct multivariate analysis, the sample size used to obtain good results can be determined at least 5-10 times the number of indicators used. There are 19 indicators used, so the sample required is a minimum of 95 (5x19) and a maximum of 190 (10x19). Based on this, the respondents determined in the study were 150 respondents because they were still in the sample size range.

Data were collected by survey method using a questionnaire in the form of Google Form which was distributed through social media. Questionnaires will be distributed to prospective respondents in such a way that a sample of 150 people is obtained according to a predetermined size (Turayev, 2021). The inferential statistical tool used is Structural Equation Modeling with Partial Least Square. Structural Equation Modeling with Partial Least Square (SEM-PLS) was measured using the Smart PLS application starting from the measurement model (outer model), model structure (inner model) and hypothesis testing.

Result and Discussion

Evaluation of the structural model (inner model)

Testing of the inner model or structural model is carried out to see the relationship between the construct, significance value and R-square of the research model. This structural model has two dependent variables, namely trust (Y1) and intention to reuse (Y2). The coefficient of determination (R2) of each dependent variable is presented in Table 1 below.

<table>
<thead>
<tr>
<th>Construct</th>
<th>R-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>0.525</td>
</tr>
<tr>
<td>Intention to re-use</td>
<td>0.737</td>
</tr>
</tbody>
</table>

Based on Table 5.12, it can be seen that the R-square value of the confidence variable is 0.525. It can be interpreted that 52.5 percent of the variability of the confidence variable is explained by the perceived ease and perceived risk variables, while the remaining 47.5 percent of the confidence variable is explained by variables outside the model. Likewise, the variable of intention to reuse has an R-square value of 0.737, meaning that 73.7 percent of the variability is explained by the variables of perceived convenience, perceived risk, and trust, while the remaining 26.3 percent of the variable intention to reuse is explained by variables outside the model.

Hypothesis testing

The significance of the estimated parameters provides information about the relationship between the research variables. The following sections describe in detail the results of direct influence testing and testing of mediating variables. Figure 1 is an empirical research model that displays the coefficient values between variables.
Based on the empirical model, the results obtained that the perceived convenience variable has a direct effect on the variable of intention to reuse with a coefficient of 0.309. The perceived risk variable has a direct effect on the re-use intention variable with a coefficient of -0.393. The variable perception of convenience has a direct effect on the confidence variable with a coefficient of 0.420, and the perceived risk variable has a direct effect on the confidence variable with a coefficient of -0.344. Finally, the trust variable has a direct effect on the variable of intention to reuse with a coefficient of 0.245.

Table 2
Direct effect

<table>
<thead>
<tr>
<th>Construct</th>
<th>Path Coefficient</th>
<th>T-statistics</th>
<th>P Values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived ease of use</td>
<td>0.420</td>
<td>4.155</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>- Trust</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived ease of use</td>
<td>0.309</td>
<td>3.931</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>-&gt; Intention to Reuse</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Risk -&gt; Trust</td>
<td>-0.344</td>
<td>3.520</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>Perceived Risk -&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention to Reuse</td>
<td>-0.393</td>
<td>4.471</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>Trust -&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention to Reuse</td>
<td>0.245</td>
<td>3.242</td>
<td>0.001</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Hypothesis testing is done by using t-statistics and looking at the p-value. If the t-statistics value the t-table value is 1.96 and the p-value is 0.05, then Ho is rejected and the research hypothesis is accepted. Based on Table 2 the results of hypothesis testing show that all research hypotheses are accepted or supported because all t-statistics values are greater than or equal to the t-table value and the p-value is less than or equal to 0.05.
The mediation variable is tested by analyzing the mediating role of the trust variable on the indirect effect of the perceived ease of use and perceived risk variables on the intention to reuse. The indirect effect test can be seen in the explanation of the analysis results in Table 3 below.

<table>
<thead>
<tr>
<th>Mediation Variable</th>
<th>(A)</th>
<th>(B)</th>
<th>(C)</th>
<th>(D)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived ease of use</td>
<td>0.103</td>
<td>0.309</td>
<td>0.420</td>
<td>0.245</td>
<td>Partial Mediation</td>
</tr>
<tr>
<td>Trust -&gt; Intention to Reuse</td>
<td>(Sig.)</td>
<td>(Sig.)</td>
<td>(Sig.)</td>
<td>(Sig.)</td>
<td></td>
</tr>
<tr>
<td>Perceived Risk -&gt; Trust -&gt; Intention to Reuse</td>
<td>-0.084</td>
<td>-0.393</td>
<td>-0.344</td>
<td>0.245</td>
<td>Partial Mediation</td>
</tr>
<tr>
<td></td>
<td>(Sig.)</td>
<td>(Sig.)</td>
<td>(Sig.)</td>
<td>(Sig.)</td>
<td></td>
</tr>
</tbody>
</table>

Based on the results in Table 3 above, trust is stated to be able to mediate the effect of perceived ease of use on intention to reuse. This result is shown from the mediation test carried out, which shows that effect A has a significant result, effect B has a significant result, effect C has a significant result and effect D has a significant value as well. So that trust is stated to be able to mediate the effect of perceived ease on intention to reuse. Furthermore, the results obtained that trust can mediate the perception of risk on the intention to reuse. This result is shown from the mediation test conducted, which shows that effect A has a significant value, effect B has a significant value, effect C has a significant value and effect D has a significant value. Based on these results, trust is stated to be able to mediate the effect of risk perception on intention to reuse. As for the results of the indirect effect value, the total effect of the variables and the calculation of VAF.

The results of trust mediate the effect of perceived ease of use on the intention to reuse with a VAF value of 0.333. That is, the role of trust as a mediating variable is 33.3 percent. The mediation value of 33.3 percent is between the value range of 20 percent to 80 percent, then the variable is classified as a partial mediation variable. Thus, it can be concluded that the results in this study indicate that trust can mediate the relationship between perceived ease of use and intention to reuse.

The role of trust in mediating the effect of risk perception on the intention to reuse shows a VAF value of 0.213. That is, the role of trust as a mediating variable is 21.3 percent. The mediation value of 21.3 percent is in the range of 20 percent to 80 percent, then the variable is classified as a partial mediation variable. So it can be concluded that the results in this study indicate that trust can partially mediate the relationship between perceived risk and intention to reuse.

Conclusion

The development of concepts and models in this research contributes to the science of marketing and consumer behavior. The findings of this study provide empirical contributions, especially related to the Technology Acceptance Model (TAM) theory, which includes the perceived ease of use, as well as other theories related to the perception of risk, trust and intention to reuse payment methods, especially QRIS. The results of this study strengthen the findings of several previous studies which show that trust can mediate the effect of perceived ease of use and perceived risk on intention to reuse, and the results of research that have positive and negative and significant effects clarify the relationship between variables. The results of this study are expected to be empirical evidence for future research and be able to enrich the development of marketing management science related to the Technology Acceptance Model (TAM), risk perception, trust and re-use intention.

The trend of digital transactions that continues to increase during the COVID-19 pandemic can be an opportunity for Bank BPD Bali to improve services to its customers by providing various digital transaction applications, which can support customers’ needs for non-cash transactions. The presence of the QRIS feature on BPD Bali Mobile Banking is expected to be one of the products that can be favoured by the Bank, considering that this payment method is designed to facilitate digital payment transactions so that it is more effective and efficient.

One of the managerial implications of this research is that it can provide information to the management of Bank BPD Bali to get to know their customer's perceptions of the emergence of the QRIS feature which was just launched
in the last two years or so. Starting to introduce and familiarize BPD Bali customers to start adapting to start using these features certainly requires various strategic steps from the management. Some of the findings in this study can have practical implications for the management of this matter. This study found that for a payment feature that is relatively new and unfamiliar to customers, the convenience offered can be something that can attract customers' intention to continue using the feature. This can be a consideration for management to prioritize the ease of use of a newly introduced feature to increase customer interest to always use it.

In addition to convenience, the risk side is found to be one of the things that customers consider when deciding to continue using a feature. This research can provide information to management that the risks that may arise when customers use the QRIS feature must be anticipated as early as possible. When customers experience problems when using the QRIS feature, they may have the view that the feature has risks that can lead to reluctance to reuse the feature.

References


