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Implementation of TAM in the Testing of the Intention of Use of the Indonesia Standard Qr Code (Qris)

Grace T. Pontoh[a], Andi Faisal[b]*, Asrini[c]
[a] Faculty of Economics and Business (FEB) Hasanuddin University, Makassar, Indonesia
[b] STAI DDI Sidrap, Indonesia
[c]STIE Ichsan Sidrap, Indonesia
*Corresponding Author

Abstract:- This article examines the use of the Indonesian Standard Quick Response (QRS) Application by using the Technology Acceptance Model (TAM). The study was conducted in Pare-Pare with a total sample of 650 respondents. However, of this number, only 106 respondents could be used as research data. The research instrument (questionnaire) was created using a google form and sent to respondents via the WhatsApp (WA) messenger. Data were analyzed using Structure Equation Model (SEM) analysis through the Partial Least Square (PLS) program. The results of hypothesis testing indicate that there is no relationship between the social norms variable (subjective norm) and usability perception of the application (Perceive usefulness. Likewise, the influence of the subjective norm variable on the variable perceived ease of use of the application. However, there is an effect of perceived ease of use of the applications on perceptions of application usefulness. In testing the effect of the perceived usefulness of the application on the intention to use the application, it was found that there was an influence between the two. The same condition also occurs in the perceived ease of use variable, it is found that there is an influence on the intention to use the application. This finding is useful both theoretically and practically. These findings can be the basis for improving the quality (usability) of applications and designing applications that are easier to use.

Keywords:- *Technology Acceptance Model (TAM), Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Subjective Norm (SU), Behavioral Intention (BI), QR Code, QRIS.*

I. INTRODUCTION

The use of technology applications technology is necessary for the current era. Financial technology applications are very helpful for entrepreneurs in optimizing their potential business income (Nyoman: 2020). One application that is being developed is the Quick Response (CR) Indonesia Standard Code (QRIS) application. This application was launched by Bank Indonesia in August 2019 to support non-cash transaction services at all merchants in Indonesia. In January 2020 Bank Indonesia required all non-cash payment services such as mobile banking and e-wallet services to use the QRIS application. One of the goals of launching this application is standardization so that transactions with QR Codes are made faster, easier, and safer because digital transactions can be monitored by regulators through one door (Kurniawati, 2010) which is Bank Indonesia.

As a newly launched application, not much has been researched on the implementation of the QRIS Application, especially regarding the determinants that affect the intention to use this application. However, there are several researchers, including Mayanti (2020) who found that the determinants of people's intentions to use the QRIS application were Facilitating Condition and Hedonic Motivation; Kurniawati, Zuhro & Malik (2021) found that the intention to use the application is determined by the literacy of the application; Saputri (2020) found that the determinants of the intention to use the QRIS application were the perception of convenience, the perception of trust, the perception of benefit and the perception of risk. However, of the four perceptions, only the usefulness perception has a significant influence; Ningsih, Sasmita & Sari (2021) found that the determinants that had a significant effect on students' decisions to use electronic money based on the QRIS application were perceived benefits, perceived convenience, and perceived risk; Meanwhile, Aulia & Suryanawa (2019) found that there was a direct influence between perceived ease of use on perceived usefulness as well as a direct influence between perceived ease of use on usage intentions. However, there is no influence between perceived usefulness on usage intentions and there is no influence between perceived convenience and intention through perceived usefulness as a mediating variable.

In this article, the researchers focus on exploring the determinants of the intention to use the QRIS application by a businessman (UMKM). As seen in the literature review above, the researcher focuses on application users, namely consumers both in the community segment (Mayanti: 2020 & Saputri: 2020) and the millennial/students segment (Kurniawati, et al: 2021, Ningsih, et al: 2021 & Aulia, Suryanawa: 2019). However, there are no researchers who have tested the determinants of QRIS application users against UMKM businessmen or the authors have not

obtained it from Google Scholar. Based on that reason, the researcher intends to explore the determinant factors of the intention to use the application by UMKM businessmen. The reason researchers focus on UMKM businessmen is because they are the majority business group in Indonesia. Based on data from the Ministry of Cooperatives and UMKM, 70 percent of business actors in Indonesia come from UMKM. So that the largest digital money turnover is in this segment.

To test the determinant factors that affect the intention to use the QRIS application, the authors use a tested model, namely the Technology acceptance model (TAM), Davis (1986), Lagatry & Sufatrin (2015), Yulianto (2011), Sundari, et al (2016). This model was first introduced by Davis (1986) and has since been developed into several models such as TPB and UTAUT. The implementation of TAM on technology acceptance has been very well tested so that researchers no longer test this model but also additional variables which are then called TAM external constructs.

According to Jogiyanto (2007), there are currently approximately 25 additional constructs used as external constructs of TAM in testing the acceptance of technology. One of these additional constructs is the Social Norm (Subjective Norm). Several researchers have found the influence of social norms on decisions to use technology, including; Theo et all (2012), Gumossoy et all (2018), Al Nawafleh et all (2018), Kim et all (2007), Benjamin et all (2018), Nayanjith (2019) & Mutahar et all (2017). From the various findings of this study, it can be said that the social norm variable is also a construct that has been tested empirically. However, given that each place has its social characteristics, this variable may not affect the intention to use technology. Therefore, in this article, the researcher will examine the determinant of businessman' intention in Parepare to use QRIS application by adding one additional construct of TAM which is Social Norm (Subjective Norm)

II. MATERIAL AND METHOD

2.1 Social Norm (Subjective Norm)

As previously explained, the social norm variable is an additional construct outside the main TAM model. This construct is the main construct of TRA developed by Fishbein and Ajzen (1975) which is defined as a person's perception or view of the beliefs of others that will influence the decision to perform or not perform the behavior under consideration (Jogiyanto: 2007). The first researcher to incorporate Social Norms into the TAM Model was Taylor and Todd (1995) which were then followed by several researchers afterward. In general, the researchers found that there was a significant effect of social norms on the PU and PEOU constructs as well as on BI; Theo et all (2012), Gumossoy et all (2018), Al Nawafleh et all (2018), Kim et all (2007), Benjamin et all (2018), Nayanjith (2019) & Mutahar et all (2017).

- *H1: Subjective Norm has a significant effect on perceived usefulness (PU)*
- *H2: Subjective Norm has a significant effect on Perceived Ease of Use (PEOU)*

2.2 Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)

TAM, PU, and PEOU can manipulate individual attitudes toward the adoption of certain technologies (Davis, 1989). Several studies have validated the significance of both constructs in examining users' intentions to adopt IS (Venkatesh and Morris, 2000; Luarn and Lin, 2005; Gu et al., 2009). For example, a study by Luarn and Lin (2005) shows that PU and PEOU are significant determinants in the adoption of m-banking in Taiwan. If users believe that using the system will be effort-free and can improve their job performance (Davis, 1989), then they are likely to develop positive feelings towards both perceptions and are more likely to use the application.

- *H3: Perceived ease of use (PEOU) has a significant effect on perceived usefulness (PU)*
- *H4: Ease of Use of Perception (PEOU) has a significant effect on Intention (BI) using the QRIS Application*
- *H5: Perceived Usefulness (PU) has a significant effect on Intention (BI) using the QRIS Application*

Based on a theoretical review and a review of the research, the conceptual framework of this article can be seen in Figure 1 below.

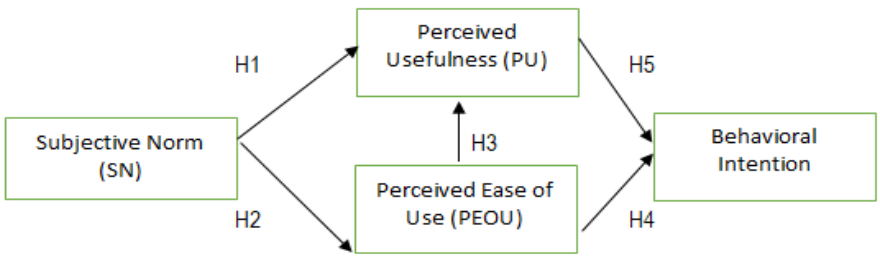

Figure 1: Conceptual Framework

2.3 Research methods

The survey was conducted in Pare-pare, South Sulawesi, Indonesia. Pare-Pare was chosen as the sampling location because the growth of application users in this city is very significant even though in quantity it has not exceeded big cities, such as Makassar (the capital city of South Sulawesi). Data collection is done through a questionnaire that is shared online using Google Form. Questionnaire distribution was carried out through WhatsApp (WA) Messenger and Telegram. We distributed the Questionnaire to 650 app users. Based on Wallace (2004), the minimum number of samples distributed is 400.

Therefore, the researchers think that the number is representative. However, from the 650 telephone numbers that we sent out the Questionnaire, only 106 respondents filled out the Questionnaire. Based on the technology adoption literature, the sample is compatible with other studies such as 105 (Amin et al., 2008).

The data were analyzed using the Equation Structure Model (SEM) analysis with the Partial Less Square (PLS) application. which aims to test the measurement model, structural model, and test the proposed hypothesis. The advantage of using PLS is that there is no need for normality tests or other parametric test requirements (Hair et al., 2017). The PLS method also has the advantage of testing whether the proposed theoretical model is appropriate. Before testing the model, it is necessary to test the validity and reliability of the constructs to ensure the accuracy and consistency of the variables. To test the constructs of SN, PU, and PEOU, we used the final measurement items adapted from Davis et al (1989) and Chau (1996) in Jogiyanto (2007).

III. FINDINGS / THE RESULT OF THE RESEARCH

3.1 Respondents Profile

Respondents from this study are 106 people consisting of 75 women and 31 men. Of this number, 45 respondents are business owners while 61 respondents are business managers. Then from the type of business respondents, there are 22 types of coffee shop businesses, 30 types of restaurant businesses, 14 types of lodging businesses, 5 types of laundry businesses, 12 types of cellular agent businesses, 15 types of shop businesses (market traders) and 8 types of drinking water refill service.

3.2 Model and Hypothesis Testing

Analysis using PLS was carried out through the Outer Model test. The measurement model test consists of two stages, namely testing the validity and reliability. According to Hair et al. (2011) said the instrument is valid if the outer loading value is above 0.70 and the Average Variance Extracted (AVE) value must be greater than 0.50. A construct is said to be reliable if the composite reliability and Cronbach alpha values of each instrument variable are above 0.70. The following is a picture of the results of the evaluation of the measurement model (Outer Model):

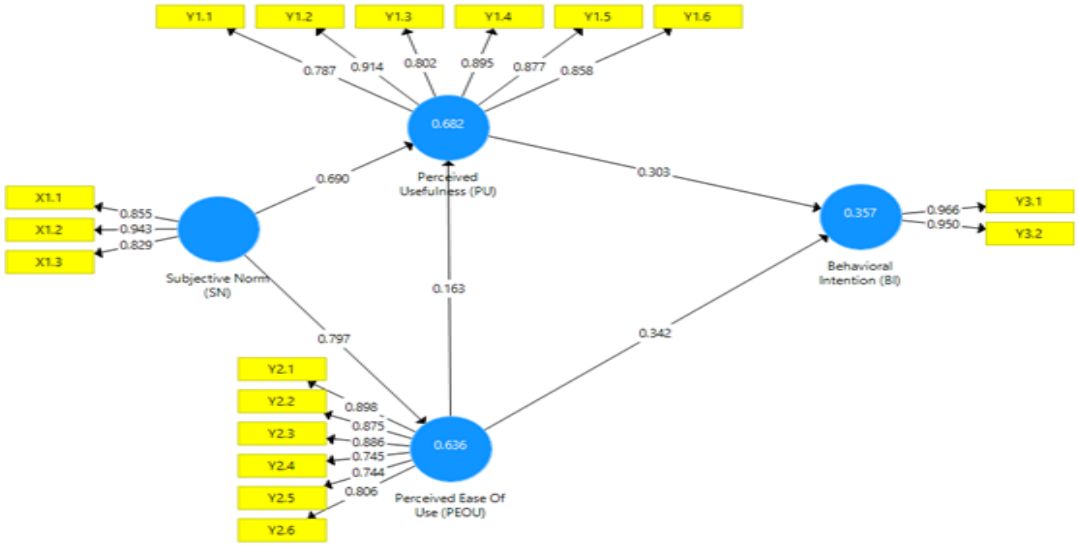

Figure 2: Evaluation of the Measurement Model (Outer Model)

Table 1: Evaluation of the Measurement Model (Outer Model)

Variable	Question Items	*Outer Loading*	*Cronbach's Alpha*	*Composite Realibility*	AVE
Subjective Norm (SN) (X1)	X1.1	0855	0.911	0.957	0.918
	X1.2	0.943			
	X1.3	0.829			
Perceived Usefulness (PU) (Y1)	Y1.1	0.787	0.908	0.929	0.686
	Y1.2	0.914			
	Y1.3	0.802			
	Y1.4	0.895			
	Y1.5	0.877			
	Y1.6	0.858			
Perceived Ease Of Use	Y2.1	0.898	0.927	0.943	0.734
	Y2.2	0.875			

(PEOU) (Y2)	Y2.3	0.886			
	Y2.4	0.745			
	Y2.5	0.744			
	Y2.6	0.806			
Behavioral Intention (BI) (Y3)	Y3.1	0.966	0.849	0.909	0.769
	Y3.2	0.950			

Based on The results of the second stage of testing can be interpreted that the value of the outer loading of all instruments is above 0.70 as well as the composite reliability and Cronbach alpha values and the AVE value which is above 0.50. So, all the instruments in this study were said to be valid and reliable.

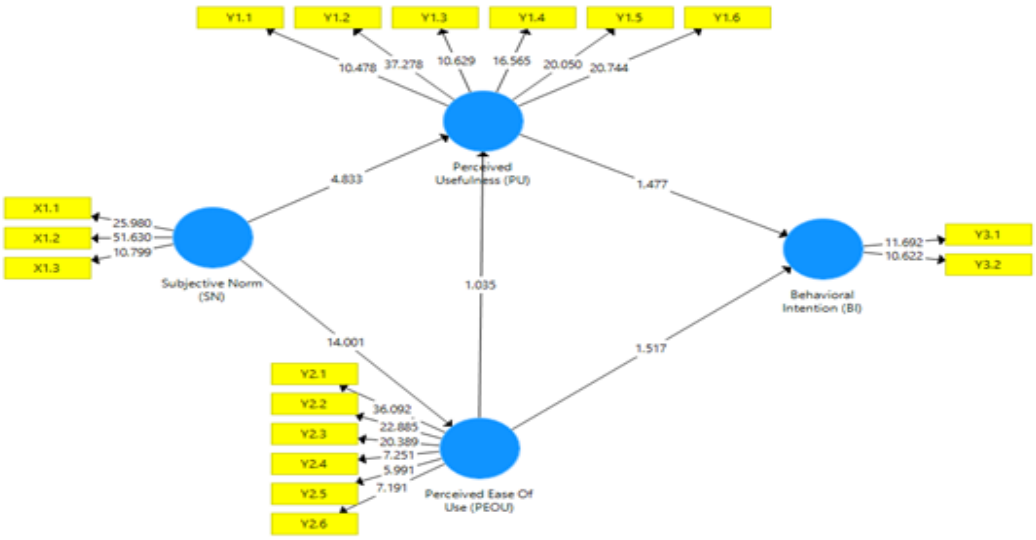

Figure 3: Hypothesis Testing

IV. DISCUSSION

The results of hypothesis testing indicate that there is no influence between the variable social norms (subjective norm) and the variable perceived usefulness of the application (Perceived Usefulness). Likewise, the influence of the subjective norm variable on the variable perceived ease of use of the application (perceived ease of use). This finding is different from the findings of several previous researchers such as Theo et all (2012), Gumossoy et all (2018), Al Nawafleh et all (2018), Kim et all (2007), Benjamin et all (2018), Nayanjith (2019) & Mutahar et all (2017). However, researchers cannot compare the results of this test to researchers who tested the use of QRIS in Indonesia, due to the absence of researchers who added social norm variables as an additional construct in the TAM test on the use of the QRIS application. This could be because the use of the QRIS Application is necessary at this time so that users do not care about social opinions regarding the use of QRIS. However, this assumption still requires further research to prove it.

In testing the effect of Perceived Ease of Use (PEOU) on Perceived Usefulness (PU) it was found that there was an influence between the two. This is following the findings of previous research (Davis: 1986). This finding is not surprising, given that it is a highly empirically tested model. So this finding again strengthens the model.

The results of hypothesis testing show that there is a significant relationship between the perceived usefulness construct (PU) and the Perceived Ease of Use Construct (PEOU) on Behavioral Intentions (BI) using the QRIS application. This finding is in line with various previous findings such as; Mayanti (2020); Kurniawati, Zuhro & Malik (2021); Saputri (2020); Ningsih, Sasmita & Sari (2021) and Aulia & Suryanawa (2019). Thus, the results of this study further strengthen the TAM operational model on the one hand and provide empirical evidence that the intention to use the QRIS application is largely determined by the Perceived Usefulness Construct (PU) and the Perceived Ease of Use Construct (PEOU)

V. CONCLUSION

This study aims to examine the effect of the Social Norm Construct (SN) on perceived usefulness (PU) and perceived ease of use (PEOU), examine the effect of perceived ease of use (PEOU) on perceived usefulness (PU), and examine the effect of perceived usefulness (PU) and Ease of Use of Perception (PEOU) on Behavioral Intentions (BI) Using the QRIS Application in Parepare, South Sulawesi. Specifically, we found that social norms (SN) did not affect user perceptions of application usability and user perceptions of application ease of use. However, our findings suggest that there is an effect of Perceived Ease of Use (PEOU) on Perceived Usefulness (PU), and there is an effect between Perceived Usefulness (PU) and Perceived

Ease of Use (PEOU) on user intention to use QRIS application (BI)

In general, the findings of this study have implications for the theoretical and practical aspects. In the theoretical aspect, the researcher found things that were different from the findings of previous researchers regarding the construct of Social Norms. However, in the main construct of TAM, the researchers found the same thing as the previous researchers. This raises a question mark, why the construct of social norms does not affect the perceived usefulness and perceived ease of use. Practically, these findings can be input for application users and also QRIS Application service providers to further improve the quality (usability) of the application and design the application to make it easier to use. Thus, more and more MSME actors will use the application. Moreover, the challenge faced by application providers today is that the majority of UMKM businessmen are the "old" generation who are not familiar with technology, while the majority of consumers are millennials and or educated circles who are familiar with applications. So, to avoid inequality, application service providers must design applications to be easier to use and more useful.

As is general research has limitations, this article also has several weaknesses that can be improved through future research. The weaknesses of this research, namely; First, the number of respondents who filled out the questionnaire was not representative of the entire population. In future research, researchers should be more active in following up with respondents to the questionnaires sent to them. Second, the number of samples does not represent all types of UMKM businessmen in Parepare. So it is hoped that further research, as much as possible the Questionnaire covers all types of existing businesses. Third, the researchers only tested social norms on perceived usefulness (PU) and perceived ease of use (PEOU) but did not test directly on application usage intentions. Future researchers are expected to be able to test this, it could be that if testing social norms directly on use intentions, a significant relationship is found. Fourth, the number of constructs tested in this article is very simple, therefore future researchers are expected to test more additional constructs.

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