

Analysis of QRIS Users in Indonesia Society in the Cashless



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ABSTRACT: The development of the digital era is a time when information and communication technology has changed the way people live. One of the developments in the digital era is the increase in cellphone users, laptops, and using the internet from these developments making changes in the way of transactions in Indonesia. The digital way of transacting also affects consumer behavior in shopping, for example, currently many consumers choose to shop with non-cash payment methods. This study analyzes a user's intention and behavior towards the QRIS payment channel using the UTAUT2 theory. This study uses a survey method with a questionnaire to collect data from 364 respondents who are users of the QRIS payment channel in Indonesia with the criteria for QRIS payment channel users and those who have used and are over 17 years old. This research is quantitative research to measure and analyze data with the aim of testing the causal relationship between variables. This research uses SEM analysis with the help of LISREL V.8.8 software to analyze the data. The results of this study indicate that the intention to use the QRIS payment channel in the non-cash era using the UTAUT2 theory is influenced by effort expectancy, social influence, trust, habit, and perceived risk. Meanwhile, use behavior is influenced by habit and behavioral intention.

KEYWORDS: QRIS, Effort Expectancy, Social Influence, Trust, Habit, and Perceived Risk, Behavioral Intention, and Use Behavior.

I. INTRODUCTION

The development of the digital era is a time when information and communication technology has changed the way people live. One of the developments in the digital era is the increase in users of cellphones, laptops, and using the internet. Especially in Indonesia, internet users in Indonesia in 2021 reached 196.7 million users, in 2022 it reached 210 million users, and it is predicted that in 2023 internet users in Indonesia will reach 215 million users or around 78.19% of the total population of Indonesia, the information was obtained from the Indonesian Internet Service Providers Association (APJII). Advances in information and communication technology (ICT) are one of the important factors in socio-economic development that contribute to increased growth in both developed and developing countries (Al-Fraihat et al., 2020 and Alam et al., 2020). For example, the progress of the development of mobile payment systems (Okaily et al., 2023). The development of the Indonesian economy, which is getting more sophisticated every day, has made changes in the way of transactions in Indonesia. The digital way of transacting also affects consumer behavior in shopping, for example, currently many consumers choose to shop with digital payment methods. Digital payment means using digital or electronic technology to make transactions, such as Electronic Wallet (E-Wallet), Bank Transfer, Credit Card, Debit, NFC (Near Field Communication), and QR Code. The largest digital transactions in Indonesia come from retail (28%), online transportation (27%) food ordering (20%), e-commerce (15%, and tagiahn payments (7%) (Yulie, 2020). QRIS is part of the Indonesian Payment System Blueprint (BSPI) 2025, which was launched by BI and the Indonesian Payment System Association (ASPI) on August 17, 2019. QRIS currently has various features that make it easier for users and merchants, such as QRIS Without Face-to-Face (TTM) (2020), QRIS Consumer Presented Mode (CPM) (2021), and QRIS Between Countries (2022). Bank Indonesia noted that data as of June 2023 QRIS had reached 26.7 million merchants, with 91.4% of these being MSMEs. Meanwhile, the number of QRIS transactions throughout 2022 amounted to 1.03 billion transactions, or grew by 86% (year-on-year) (BI, 2023). This standardization is used to speed up and simplify digital transactions in Indonesia (Nainggolan et al., 2022). The presence of QRIS, all types of QR code-based payments from various payment applications can be detected with one QR code, which belongs to QRIS. QRIS can not only be implemented in large-scale businesses, but small-scale businesses can also implement payment methods using QRIS (Azzahroo and Estiningrum, 2021). So that all Indonesian people can use QRIS without exception. People only need to prepare a smartphone that has a payment application or digital wallet installed to be able to make payments

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via QRIS.

Increasing consumer interest is increasingly adopting digital technology in their daily lives, including in making payment transactions. Speed in making transactions is the main reason why consumers prefer digital payment technology over cash payments. It is hoped that increased consumer interest in QRIS can accelerate the adoption of non-cash payment technology and increase efficiency and convenience in making non-cash transactions in Indonesia. The utilization of payment with QRIS is still not available at various merchants and there are still many merchants who are less active or do not make the QRIS payment channel the main choice in making transactions (Ahdiat, 2023), thus making consumer intentions in making payment transactions using the QRIS payment channel not carried out. This is also evidenced by QRIS user data, where merchant QRIS user data (26.7 million) is smaller than consumer QRIS user data (43.144 million) (BI, 2023). Figure 3.3 also shows data that the QRIS payment channel is still lagging behind other payment methods where QRIS is in third position even though the QRIS payment channel is available in various digital wallet such as Dana, LinkAja, ShopeePay, Go-Pay, and OVO and M-banking such as BNI, BRI, BCA, and Mandiri but this still makes the QRIS payment channel still not in demand by the Indonesian people.

In research (Karniawati et al., 2021) stated that there are still many who do not understand what QRIS is. Previous research (Karniawati et al., 2021) has confirmed that the younger generation's "understanding of financial technology is still very general and that understanding is limited to the meaning of words. According to a study (Novi Arianti et al., 2019) payments with QRIS codes are not available in Bali so there is less interest in using services with QRIS codes. The QRIS payment channel has superior QRIS characteristics which have meaning, namely, Universal: QRIS can accept any payment application payment that uses a QR code, GampanG: easy to scan and click, pay, Profit: can use any QR payment account to pay, and Direct: According to Bank Indonesia delivered by Erwin haryono on April 11, 2023 that QRIS has the advantages of fast, easy, cheap, safe, and reliable. Besides having advantages, the QRIS payment channel also has several disadvantages, namely, limited transaction amounts, limited recipients, lack of socialization, and the threat of digital crime. The threat of digital crime that has occurred is like the case that befell Alipay and WeChat Pay in China in 2014 in the form of a fake QR code where the money we pay does not go to the merchant or shop where we make transactions (CNN Indonesia, 2022). Due to the shortcomings, problems, and advantages described above, researchers feel the need to clearly know user intentions in using the QRIS payment channel in Indonesia, where Indonesia is a developing country and has a large population and consists of various ethnicities and religions. One way to analyze a person's intention to accept and use new technology is to use the Unified Theory of Acceptance and Use of the Technology (UTAUT2) model. The model explains to investigate the acceptance and use of new technology. The model has several variables, namely, performance expectancy, effort expectancy, social influence, facilitating conditions and habits. In research conducted by (Al-Saedi et al., 2020) on payment systems with M-payments based on the UTAUT theory conveys trust and perceived risk.

II. LITERATURE REVIEW

A. Consumer Behavior

Consumer behavior according to Kotler and Keller (2008) is a study of how individuals, groups, and organizations choose, buy, use, and how goods, services, ideas to satisfy needs and desires. Consumer behavior includes the thoughts and feelings that people experience and the actions they take in the consumption process. It includes all the things in the environment that influence the way a person thinks, feels and acts. Consumer behavior is dynamic because the thoughts, feelings and actions of individual consumers, target consumer groups and society in general and change with the times (Peter & Olson, 2010). In today's digital environment, consumers consistently move from online to offline. Therefore, seeing from several changes in customer behavior, it is also important for marketers to determine the payment method strategy because this stage is the final stage in the customer buying process, which determines whether the consumer journey must be adjusted to the current digital age, one of which provides digital payment facilities, one of which uses QRIS. Theory of Unified Theory of Acceptance and Use of Technology (UTAUT). UTAUT has served as a basic model and has been applied to the study of various technologies in both organizational and non-organizational environments. Application and replication of the entire model or not in an organizational environment that contributes to strengthening its generalizability (Neufeld et al., 2007) UTAUT theory has now been extended to UTAUT3. In this study, the focus is on using UTAUT2 theory. UTAUT2 is a development of UTAUT theory. Venkatesh et al. (2003) developed a comprehensive UTAUT based on a thorough review of the eight dominant technology adoption models (Venkatesh et al., 2003) to overcome the limitations of existing theories. Therefore, Venkatesh et al. (2003) proposed an extended version of UTAUT that adapts the model to the context of consumer technology acceptance, commonly known as: UTAUT2.

B. Qris (Quick Response Code Indonesia Standard)

This QRIS (Quick Response Code Indonesia Standard) payment channel was developed by the payment system industry. Indonesia aims to cooperate with Bank Indonesia to process all payments. Transaction processing using QR codes is easier and

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faster and has strict security. All PJSPs (payment system service providers) that use payments with QR codes are required to implement QRIS and the QR codes used must be customized, must meet the QRIS standard by December 31, 2019. QRIS, which previously allowed merchants to make multiple QR code payments, a user had multiple accounts with PJSPs because he could only scan one of his QR codes according to the application they had. However, with QRIS this is possible. Allowing each PJSP to easily connect and ensure interoperability (currently only for merchants) to do this, you need a QR code and a PJSP account to accept payments from various PJSP applications. Even users don't need more apps to make transactions with QR code payments. Degree of Mediation between consumer categories indicates adoption of services such as Attitude towards innovation varies. QRIS offers benefits for MSME merchants (Sihaloho et al., 2020). Therefore, QRIS is a guideline issued by Bank Indonesia to unify various information.

C. Utaut2 (Unified Theory Of Acceptance And Use Of Technology)

Based on previous literature supporting the strength of UTAUT and UTAUT2. UTAUT emerged as the second most popular theoretical lens in understanding consumer mobile payment adoption (Patil et al., 2020). For example, Slade et al. (2015a) utilized UTAUT to examine consumer adoption of mobile payment proximity in the United Kingdom. However, like other popular IS rollout models, so is UTAUT. It was originally developed in an organizational context to describe employee technology and forecasting. Therefore, Venkatesh et al. (2012) proposed an extended version of UTAUT adapting the model to the context of consumer technology acceptance. It is commonly known as: The UTAUT2 model is a development of the technology acceptance model to understand the consumer context or consumer use (Venkatesh et al., 2012).

1. Performance Expectancy (PE)

Performance Expectancy (PE) is the degree to which an information system or technology will offer benefits for consumers to perform certain activities (Patil et al., 2020). Five different constructs and related theories related to the unification of the Performance Expectancy (PE) construct are as follows perceived benefits (TAM/TAM2), job suitability (MPCU), extrinsic motivation (MM), relative advantage (IDT), and outcome expectations (SCT) (Venkatesh et al., 2003). According to previous research (Venkatesh et al., 2012). Performance Expectancy (PE) as the strongest predictor of consumer confidence and intention in adopting a technology. Several previous studies have found a positive and significant impact of perceived benefits on consumer attitudes towards using mobile payment services in Pakistan and China (Aslam et al., 2017 and Tiang and Tong., 2013; in Patil et al., 2020). Meanwhile, according to Wulandari (2017) found the impact of PU on non-cash payments in tourism in Indonesia. Meanwhile, Bailey et al., (2017) and Schierz et al., (2010) (in Patil et al., 2020) found a positive and significant relationship between perceived benefits and consumer attitudes towards mobile payment adoption.

According to Al-Sabaawi et. al., (2023), Al-Saedi et al., (2020), and Okaily et al., (2023) in their research results found that performance expectancy has a significant and positive effect on intention to use. Previous research has found that EE can be the most significant and strongest predictor of customer intention to adopt M-payment technology (Khan et al., 2017; Morosan & DeFranco 2016; in Xu Paris et al., 2023). Based on the explanation above, the following hypothesis is proposed:

H1: Performance Expectancy (PE) has a positive and significant effect on the intention to use the QRIS payment channel.

2. Effort Expectancy (EE)

Effort Expectancy (EE) is the level of ease associated with using technology (Venkatesh et al., 2012). According to Venkatesh et al., (2003) there are three constructs related to the unification of Effort Expectancy namely, perceived ease of use (TAM/TAM2), complexity (MPCU), and ease of use (IDT). Several technology adoption researchers have reported mixed research results, namely the significant and insignificant impact of Effort Expectancy or its substitute constructs on attitudes and behavioral intentions. Researchers (Bailey et al., 2017; Schierz et al., 2010; Wulandari, 2017; in Patil et al., 2020) have identified a significant Effort Expectancy impact on attitudes and behavioral intentions in using mobile payment systems.

The researchers identified various categories of mobile payment systems and found this relationship to be significant for several categories. Many previous studies in the field of mobile payment system acceptance found that Effort Expectancy as a significant predictor of intention to use mobile payment systems (Gharaibeh and Arshad, 2018; Rita et al., 2018; Acheampong et al., 2018; Islam et al., 2019; in Patil et al., 2020); Al-Saedi et al., 2020; and Al-Sabaawi et. al., (2023). A number of M-payment studies show that Effort Expectancy has a significant positive impact on behavioral intention to adopt M-payment (Alalwan et al., 2017; Kim G., et al., 2010; Im I., et al., 2013; in in Patil et al., 2020). Based on the explanation above, the following hypothesis can be proposed:

H2: Effort Expectancy (EE) has a positive and significant effect on the intention to use the QRIS payment channel.

3. Facilitating Condition (FC)

Facilitating Condition (FC) is the extent to which a person believes that organizational, technical, and infrastructure will help him

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use the system (Ventakesh et al., 2003). Facilitating Conditions are significant predictors of information technology users, namely, perceived behavioral control, facilitation, and compatibility (Venkatesh et al., 2003). Facilitating Conditions are consumers' beliefs about the resources and support available to them to perform a behavior (Dwivedi et al., 2007; Venkatesh et al., 2012). This conveys that if the operational infrastructure is available and facilitates the use of mobile payments, therefore, the behavioral intention to adopt mobile payments will increase (Oliviera et al., 2016).

According to Xu Paris et al (2023) facilitating condition (FC) has a significant effect on the intention to adopt M- payment technology and previous studies have found that Facilitating Condition (FC) is a significant predictor of intention to use mobile payment systems (Gharaibeh and Arshad, 2018; Rita et al., 2018; Gupta et al., 2018; Acheampong et al., 2018). Based on the explanation above, the following hypothesis can be proposed:

H3: Facilitating Condition (FC) affects the intention to use the QRIS payment channel.

4. Sosial Influence (SI)

Social Influence (SI) is the extent to which consumers consider that other important people such as family, friends, colleagues, etc. in their lives believe that they should use certain technologies (Baishya & Samalia, 2020; Ventakesh et al., 2012). In their lives, they believe that they should use certain technologies (Baishya & Samalia, 2020; Ventakesh et al., 2012). Social Influence is a combination of three similar constructs namely, subjective norms, social factors, and image. These attributes emerged as significant predictors of behavioral intention in the UTAUT and UTAUT2 models moderated by age, gender, and experience. However, using the meta-UTAUT model, Dwivesi et al., 2019 established the impact of Social Influence on behavioral intention without moderating variables. Several studies in the mobile payment environment have confirmed that the significant impact of Social Influence on behavioral intention in various countries including China (Guo and Lu, 2017; in Patil et al., 2020), Qatar (Musam, et al., 2015; in Patil et al., 2020), and Portugal (Oliveira et al., 2016; in Patil et al., 2020). According to Slade et al., (2015) in Patil et al., 2020 Social Influence is the strongest predictor of non- adopter behavioral intention to use RMP (remote mobile payment). Several previous studies in mobile payment systems found that Social Influence is the main predictor of intention to use mobile payment systems (Gharaibeh and Arshad, 2018; Gupta et al., 2018; Acheampong et al., 2018; Al-Sabaawi et al., 2023). Based on the explanation above, the following hypothesis can be proposed:

H4: Social Influence (SI) has a positive and significant effect on the intention to use the QRIS payment channel.

5. Trust (TR)

Trust (TR) is a subjective belief for parties taking a stance on terms and obligations. In the field of financial transactions where users are more exposed to risks arising from uncertainty and lack of control, trust is relevant (Lu et al., 2011; Zhou 2013; Slade et al., 2015, 2015b; Ben arfi et al., 2021; in Sebastian M. G. de Blanes et al., 2023). Perceived risk factor, Trust is also a determinant of success that affects new information systems (Alalwan et al., 2016; Pham and Ho, 2011). Previous research has found that Trust is not significant to the intention to use the mobile payment system (Sebastian M.

G. de Blanes et al., 2023) while other studies have found that Trust is the main factor that positively influences the application of mobile payments (Chong et al., 2012; Dastan and Gurler, 2016; Giovannini et al., 2015; Nelloh et al., 2019; Tossy, 2014; Williams et al., 2015; Changchit et al., 2020; in Sebastian M. G. de Blanes et al., 2023). Several previous studies have found that trust has a significant and positive effect on the intention to use E-payment (Al-Sabaawi et al., 2023). Based on the explanation above, the following hypothesis can be proposed:

H5 : Trust (TR) affects the intention to use the QRIS payment channel.

6. Habit (HA)

Habit (HA) is an individual's drive to follow a behavior, a habit embedded in a task (Ventakesh et al., 2012). From an information system point of view, the underlying prediction proves that this habit has a significant impact in emotional relationships to real use (Sebastian M. G. de Blanes et al., 2023). Some previous studies have found that Habit is a significant and influential factor on individual intention to adopt electronic payments (Slade et al., 2013). Putri et al. (2017) conveyed through a survey conducted on users in Indonesia, that this factor has a significant effect on the use of electronic payments by users. In electronic payments, Indrawati and Putri (2018) studied the importance of awareness programs used by banks to raise awareness about the implementation of electronic payments and found that the Habit factor is a strong indicator of individual intention to adopt mobile payment systems. Based on previous studies on mobile payment adoption, the trend is to underlie habit and social norms as positive factors (Handayanto and Ambarwati, 2022; Hasyim, 2022; Pasaribu and Rabbani, 2022; Zain and Susanto, 2022). According to Sebastian M. G. de Blanes et al., (2023) that habit has a significant effect on intention to use. Based on the explanation above, the following hypothesis can be proposed:

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H6: Habit (HB) affects the intention to use the QRIS payment channel. H7 : Habit (HB) affects user behavior in using the QRIS payment channel.

7. Perceived Risk (PR)

Perceived Risk (PR) is a direct effect in online transactions of user adoption intention (P. Pavlou, 2003; in Al-Saedi Karrar et al., 2022). In the context of mobile payments, perceived risk is an important factor influencing consumer behavioral intentions (N. Mallat, 20017; in Al-Saedi Karrar, et al., 2022). Previous research shows that the perceived risk factor is a critical and fundamental issue in the acceptance of new technologies, such as E-payment technology. The risk issue is one of the most important priorities affecting users' intention to adopt electronic payments (Al-Sabaawi et al., 2023). In Al-Sabaawi et al.'s research, (2023) found that perceived risk has a significant effect on the intention to use E- payment. Based on mobile payment adoption studies, perceived risk is an important factor that negatively impacts mobile payment adoption (E. Slade et al., 2015; E. Slade et al., 2015). Slade et al., 2015; L. Chen, 2008; J. H. Wu and S. C. Wang., 2005; in Al-Saedi Karrar et al., 2022). Based on the explanation above, the following hypothesis can be proposed:

H8: Perceived Risk (PR) affects the intention to use the QRIS payment channel.

8. Behavioral Intention (BI)

Behaviuoral Intention (BI) is part of the development of the UTAUT2 model, which is defined as the extent of an individual's willingness and effort to perform the underlying behavior. Intention is likely to capture a variety of individual motivational factors that influence them to perform a behavior (Patil Push et al., 2020). Previous research says that behavioral intention is a good substitute for user behavior. Ventakatesh et al., (2012), in the UTAUT2 model, used measurement items based on the frequency of use of various systems for example (Auditing, logos, java games, cellular email etc.). However, some other studies (Sivathanu, 2019) use items for user behavior on a normal Likert scale. The results of research from Sivathanu (2019) and Patil Push et al., (2020) found the effect of behavioral intention on usage behavior as a significant relationship. Based on the explanation above, the following hypothesis can be proposed:

H9: Behaviuoral Intention (BI) affects Use Behavior (UB) in using the QRIS payment channel.

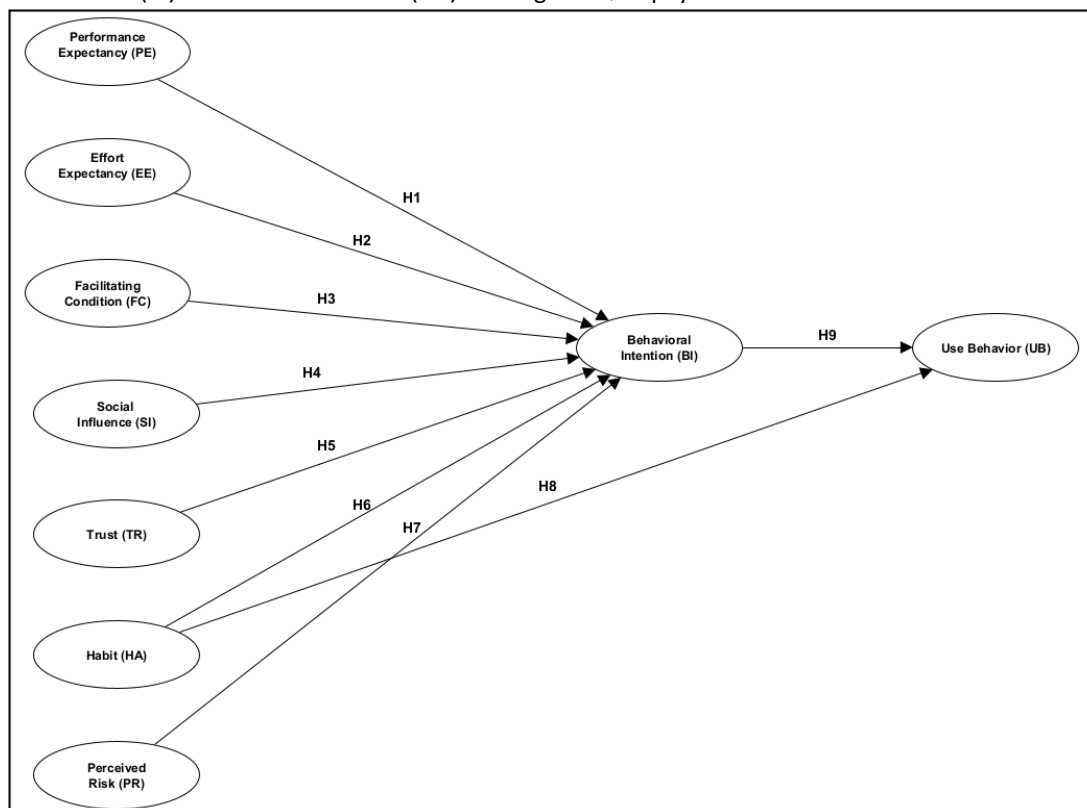


Figure 1. Conceptual Model

III. MATERIAL AND METHODS

This prospective comparative study was conducted on consumers who had purchased sanitary product in Indonesia from December 2023 to January 2024. A total 364 respondents (both female and male) were involved in this study.

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- A. Study Design:** Quantitative research uses the survey method of a questionnaire
- B. Study Location:** This study is based in Indonesia
- C. Study Duration:** December 2023 until January 2024
- D. Sample Size:** 364 respondents
- E. Sample Size Calculation:** The target of our sample was considered 364 Samples. The sample size obtained for study was 364 users QRIS in Indonesi. The confidence level of 95%.
- F. Subjects and Selection Method:** The population of this study are users QRIS in Indonesia
- G. Procedure Methodolog:** This study uses primary data in the form of questionnaires that are shown to users of the QRIS payment channel. The following is the research sampling process:
1. The sampling technique uses a non-probability sampling method in the form of purposive sampling.
 2. Determination of the number of samples based on the method from Roscoe, namely, using a sample size greater than 30 and less than 500 samples.
 3. The selection of this sample is carried out randomly with the limitation that the sample criteria meet the characteristics of the Indonesian people in each region and can represent the overall population of this study. The following are the sample criteria in this study:
 - a. QRIS payment channel users who live in Indonesia and have made payments with QRIS
 - b. Aged 17 years old

Primary data collection was carried out by distributing questionnaires online using the help of google form links via broadcast, whatsapp groups, telegram groups, line groups, instastory, and via Facebook and istagram. Statistical Analysis. Results

The research that will be discussed includes the characteristics of respondents in research using descriptive statistical analysis, measurement model analysis using GOF (Goodness of Fit Statistics) value criteria, then structural model analysis (inner model) and hypothesis testing results. Data processing in this research used LISREL SEM with the help of LISREL 8.80 software

Table 1. Demographics of Respondents (n=364)

Items		Frequency	Percentage (%)
Gender	Male	168	46,15
	Female	196	53,85
Age	17-25 years	232	63,74
	26-35 years	114	31,32
	36-45 years	13	3,57
	more 45 years	5	1,37
Education	JHS	1	0,27
	SHS	89	24,45
	D1-D4	36	9,89
	Bachelors (S1)	225	61,81
	Master (S2)	12	3,30
PhD (S3)	1	0,27	
Domicili	Western Indonesia	276	75,82
	Central Indonesia	60	16,48
	Eeastern Indonesia	28	7,69
Frequency of use in one week	1-3 times	137	37,64
	3-5 times	91	25,00
	5-7 times	70	19,23
	7-10 times	32	8,79
	10-15 times	34	9,34
Long time using	1-2 years	168	46,15
	2-4 years	172	47,25
	4-6 years	24	6,59

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H. Measurement Items

Researchers used 30 items derived from research (Venkatesh, et al., 2012; Push Patil., 2020; Indrawati and Putri D. A., 2018; Al-Saedi Karrat, et al., 2020). These items are to determine the effect of user intentions and user behavior on the QRIS payment channel.

Table 2. Measurement Items

Code	Items	Mean	G. Mean	References
Performance Expectancy				
PE1	Using the QRIS payment channel makes it easier for me to make transactions such as shopping and purchases	4,20	4,16	Venkatesh et al., 2012 dan Push Patil et al., 2020
PE2	Using the QRIS payment channel can help me complete transactions such as shopping and purchases more quickly	4,19		
PE3	Using the QRIS payment channel can increase productivity	4,09		
Effort Expectancy				
Code	Items	Mean	G. Mean	References
EE1	My interactions with the QRIS payment channel are clear and understandable	4,23	4,24	Venkatesh et al., 2012
EE2	I find the QRIS payment channel easy to use	4,30		
EE3	It is easy to become an expert in using the QRIS payment channel	4,18		
Facilitating Condition				
FC1	I have the necessary resources to use the QRIS payment channel	4,14	4,14	Venkatesh et al., 2012
FC2	I have the knowledge to use the QRIS payment channel	4,12		
FC3	I can get help from others when I experienced difficulties in using the QRIS payment channel	4,16		
Sosial Influence				
SI1	People closest to me (Family and peers) suggest that I should use the QRIS payment channel	4,06	4,00	Venkatesh et al., 2012
SI2	People who influence my behavior think that I should use the QRIS payment channel	3,98		
SI3	People whose opinions I value prefer me to use the QRIS payment channel	3,98		
SI4	People in my environment (workplace and residence) suggest I should use the QRIS payment channel	3,98		
Trust				
TR1	I believe the QRIS payment channel is reliable	4,29	4,23	ati dan Putri D.A., 2018
TR2	I believe the QRIS payment channel is safe	4,19		
TR3	I believe the QRIS payment channel is trustworthy	4,20		
Habit				
HA1	Using the QRIS payment channel has become a habit for me	4,13		ati dan Putri D.A., 2018
HA2	Using the QRIS payment channel is something I do without thinking	4,06		

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HA3	Using the QRIS payment channel is part of my daily routine	3,97	3,97	
HA4	I am addicted to using the QRIS payment channel	3,70		
Perceived Risk				
PR1	I feel uncomfortable using the QRIS payment channel service	3,18	3,10	Karrar et al.,2020
PR2	There is a high possibility of errors when using the QRIS payment channel service.	2,97		
PR3	I think the QRIS payment channel has a mechanism to ensure that user information is safe	3,15		
Code	Items	Mean	G. Mean	References
Behavioral Intention				
BI1	I intend to continue using the QRIS payment channel	4,12	4,09	Putri dan Putri D.A., 2018
BI2	I will continue to use the QRIS payment channel as often as I do now	4,06		
BI3	My intention is to continue using the QRIS payment channel rather than using other alternative payment systems	4,05		
BI4	I strongly recommend others to use the QRIS payment channel	4,12		
Use Behavior				
UB1	I use the QRIS payment channel	4,32	4,31	Push Patil et al., 2020
UB2	I pay for my purchases using the QRIS payment channel	4,30		
UB3	I use the QRIS payment channel when doing online or offline shopping	4,31		

IV. RESULT

A> Validity and Reliability

The latent variables used in this study are performance expectancy, effort expectancy, facilitating conditions, social influence, trust, habit, perceived risk, behavioral intention, and use behavior. The results can be seen in Table 3. The indicators used after processing using LISREL V8.8 show that the indicators are valid if the standard loading factor (SLF) is ≥ 0.50 , and the indicators are said to be reliable when the construct reliability (CR) value is ≥ 0.70 and the average variance extracted (AVE) value is ≥ 0.50 . as the results shown in table 3, the results obtained are all valid and reliable indicators.

Table 3. Validity and Reliability Test Results (n=364)

Indicators	SLF	Error	SLF ²	CR	AVE	Information
PE1	0,87	0,25	0,76	0,90	0,74	Valid/Reliable
PE3	0,90	0,18	0,81			
PE4	0,81	0,35	0,66			
Total	6,66	0,78	2,22			
EE2	0,87	0,25	0,76	0,88	0,70	Valid/Reliable
EE3	0,82	0,33	0,67			
EE4	0,83	0,31	0,69			
Total	6,35	0,89	2,12			
FC1	0,80	0,36	0,64			
FC2	0,82	0,32	0,67			

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FC3	0,75	0,44	0,56	0,83	0,63	Valid/Reliable
Total	5,62	1,12	1,87			
SI1	0,83	0,31	0,69	0,90	0,68	Valid/Reliable
SI2	0,80	0,36	0,64			
Indicators	SLF	Error	SLF^2	CR	AVE	Information
SI3	0,84	0,30	0,71			
SI4	0,84	0,30	0,71			
Total	10,96	1,27	2,74			
TR1	0,80	0,35	0,64	0,83	0,62	Valid/Reliable
TR2	0,75	0,44	0,56			
TR3	0,80	0,36	0,64			
Total	5,52	1,15	1,84			
HA1	0,79	0,38	0,62	0,85	0,58	Valid/Reliable
HA2	0,68	0,53	0,46			
HA3	0,87	0,24	0,76			
HA4	0,69	0,52	0,48			
Total	9,18	1,67	2,32			
PR1	0,75	0,44	0,56	0,79	0,57	Valid/Reliable
PR2	0,85	0,27	0,72			
PR3	0,64	0,59	0,41			
Total	5,02	1,30	1,69			
BI1	0,78	0,39	0,61	0,86	0,60	Valid/Reliable
BI2	0,82	0,33	0,67			
BI3	0,74	0,45	0,55			
BI4	0,75	0,44	0,56			
Total	9,55	1,61	2,39			
UB1	0,75	0,44	0,56	0,77	0,53	Valid/Reliable
UB2	0,71	0,50	0,50			
UB4	0,72	0,48	0,52			
Total	4,75	1,42	1,59			

B> Overall Mode Fit

Based on the goodness-fit research results obtained, the GFI results (0.93) which means good fit, RMR (0.027) which means good fit, RMSEA (0.019) which means good fit, TLI / NNFI (0.99) which means good fit, NFI (0.97) which means good fit, AGFI (0.91) which means good fit, RFI (0.96) which means good fit, IFI (1) which means good fit, CFI (1) which means good fit, and CN (370.06) which means good fit. The results obtained have met the criteria that should be therefore the results of the goodness- fit of this study can represent the relationship between latent variables.

Table 4. Overall Model Fit Test Result

Measures GOF	Results	Informations
Absolut Fit Measures		
Goodness of Fit Index (GFI)	0,93	Good Fit

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Root Mean Square (RMR)	0,027	Good Fit
Measures GOF	Results	Informations
Root Mean Square Error of Approximation (RMSEA)	0,019	Good Fit
Incremental Fit Measures		
Tucker-Lewis Index atau Normed Fit Index (TLI/NNFI)	0,99	Good Fit
Normed Fit Index (NFI)	0,97	Good Fit
Adjusted Goodness of Fit Index (AGFI)	0,91	Good Fit
Relative Fit Index (RFI)	0,96	Good Fit
Incremental Fit Index (IFI)	1	Good Fit
Comparative Fit Index (CFI)	1	Good Fit
Critical "N" (CN)	370,06	Good Fit

C> Structural Model

This study uses a structural equations model (SEM) with data processing using LISREL 8.8 software rocks to test hypotheses. SEM is a multivariant approach that uses measurement variables and structural models. Each indicator for a construct in the measurement model has a collective function to define the construct.

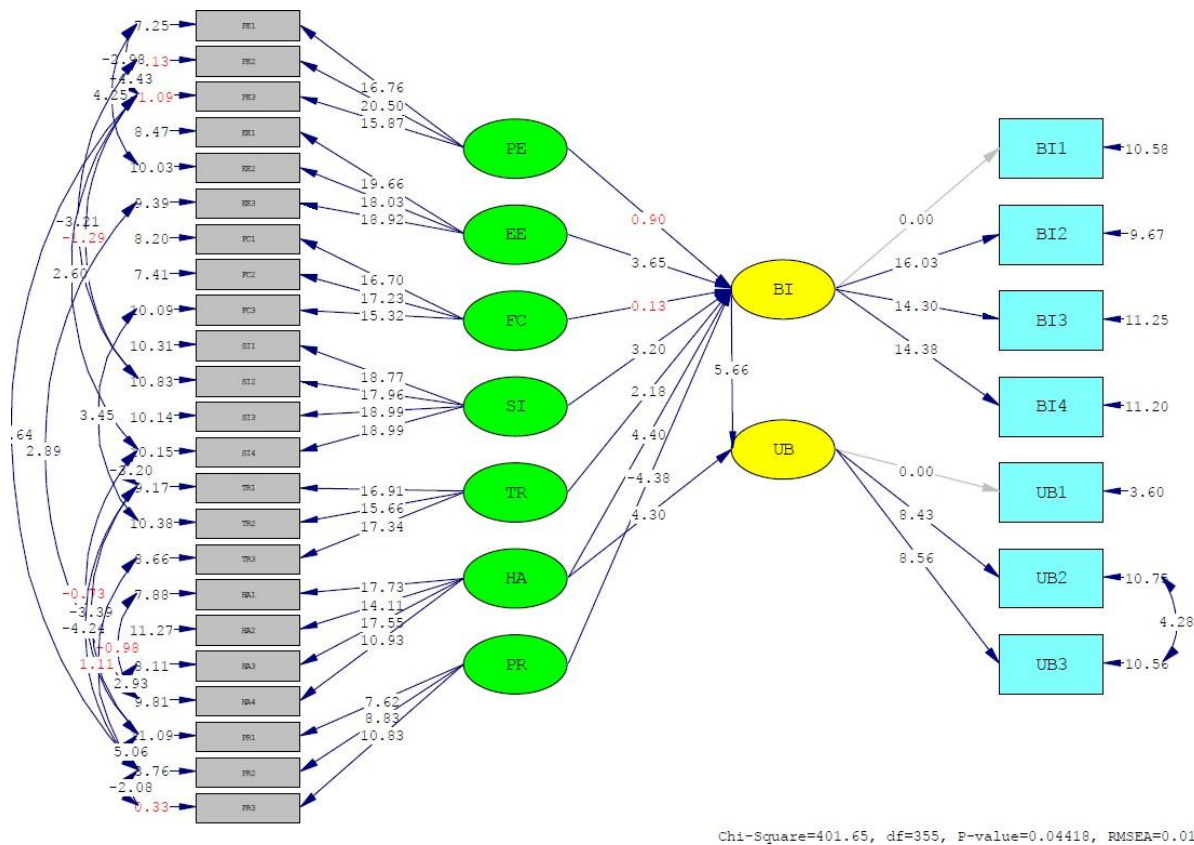


Figure 2. Structural Model

Based on the results obtained from the model structure in Figure 2, it shows the modified results of the structural model in the study so that the model can be used for hypothesis testing. The T-value test is used to prove the positive or negative effect between the variables Performance Expectancy, Effort Expectancy, Facilitating Conditions, Social Influence, Trust, Habit, and Perceived Risk on Behavior Intention, Habit on Use Behavior, and Behavior Intention on Use Behavior. Based on the results of calculations using LISREL V8.8 software, hypothesis testing has been carried out, the results of which show that hypothesis one and hypothesis 3 are rejected and hypothesis two, hypothesis four, hypothesis five, hypothesis six, hypothesis seven, hypothesis eight, and hypothesis nine are accepted. These results can be seen in Table 6.

V. DISCUSSION

This research uses SEM analysis with the help of LISREL V8.8 software. After conducting descriptive analysis, and goodness-fit

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analysis, then proceed to the analysis to determine the relationship between variables. This study consists of nine hypotheses. The results showed that two hypotheses were rejected and seven hypotheses were accepted. The hypothesis results can be seen in Table 6 below:

Table 6: Hypothesis Testing

Hypothesis		Std.error	T-value	T-table	Result
H1	Performance Expectancy =>Behavioral Intention	0,045	0,90	1,96	Dissupported
H2	Effort Expectancy => BehavioralIntention	0,059	3,65	1,96	Supported
H3	Facilitating Conditon =>Behavioral Intention	0,047	0,13	1,96	Dissupported
H4	Social Influence => BehavioralIntention	0,065	3,20	1,96	Supported
H5	Trust => Behavioral Intention	0,064	2,18	1,96	Supported
H6	Habit => Behavioral Intention	0,057	4,40	1,96	Supported
H7	Perceived Risk => BehavioralIntention	0,056	-4,38	1,96	Supported
H8	Habit=> Use Behavior	0,072	4,30	1,96	Supported
H9	Behavioral Intention => UseBehavior	0,071	5,66	1,96	Supported

The results of the analysis of the effect of performance expectancy (PE) on behavioral intention have a t-value $(0.28) \leq 1.96$ so that the first hypothesis regarding the effect of performance Expectancy (PE) on behavioral intention (BI) is rejected. This shows that performance Expectancy (PE) has no influence on behavioral intention (BI) in using the QRIS payment channel. Performance Expectancy (PE) is a belief and trust for users that the technology used increases its ability or performance. When users use the QRIS payment channel when making transactions, users only scan the QR code provided by the merchant. QRIS payment channel users are more likely to make transactions because users only need to scan and the use of QRIS can minimize data input errors so that transactions become more efficient and accurate. Based on the results of respondents' responses regarding performance expectancy (PE) on the QRIS payment channel, there are statements from respondents who do not feel helped and trust in using the QRIS payment channel due to concerns about data security and privacy in using the QRIS payment channel. The results of these findings are not in accordance with the results of previous studies which state that performance expectancy (PE) affects BI's behavioral intention in using mobile payments or digital payments (Venkatesh et al., 2012; Liebana-Cabanillas et al., 2018; Al-Saedi et al., 2020; Okaily et al., 2023;). However, the results of this study are in accordance with the results of research from de Blanes Sebastian et al., (2023) stating that performance expectations are not significant to the intention to use mobile payments, although there is a fundamental link to user intentions from a behavioral point of view in adopting mobile technology (Abdullah Omran et al., 2017) the results of this study are also consistent with the results of previously reported critical research (Sankaran, R., Chakraborty, S., 2021; Pasaribu and Rabbani 2022 Kadim and Sunardi 2022). Differences in findings between previous researchers can be influenced by cultural factors and technological developments from the research location. Previous research was not conducted in Indonesia, which is a developing country so that these factors can affect performance expectancy (PE) on behavioral intention (BI) to use the QRIS payment channel.

Effort expectancy (EE) shows that when technology is considered easy to use with little effort and time, the technology will be widely adopted by users (Al-Sabaawi et al., 2023). Effort expectancy (EE) is the level of ease associated with using new technology (Venkatesh et al., 2012). QRIS is designed to provide convenience in transactions without the need to remember account numbers or carry cash, and only scan the QR code provided by the merchant when making payment transactions. The user-friendly and intuitive interface design of the QRIS feature will be one of the influencing factors for users to use the QRIS payment channel. QRIS payment channel. The results of this study are in line with the results of previous studies which state that effort expectancy (EE) has an influence on the intention to use payment channels with QR codes (Venkatesh et al., 2012; Al-Saedi et al., 2020; Tam et al., Al-Sabaawi et al., 2023). In the research of Al-Saedi et al., (2020) said that individual intention to use a technology is strongly influenced by how young the system is used and does not require much effort, as well as Al-Sabaawi et al., (2023) said that the level of difficulty and ease of a technology will affect the intention to use the technology.

Facilitating conditions (FC) are defined by user perceptions of available resources and support (Venkatesh et al., 2003). Facilitating conditions do not have a significant effect on the intention to use the QRIS payment channel because to be able to utilize the QRIS payment channel, users do not need a complex and large infrastructure. Users only need a gadget with certain specifications and an internet connection, which currently in Indonesia both of these are affordable and spread in various places. Based on this, it can be concluded that the facilitating conditions factor is not a consideration for users in determining the intention to use the QRIS payment channel because the required infrastructure is easily obtained. The results of this study are in line with the results of previous studies which state that facilitating conditions (FC) have no influence on the intention to use payment channels with QR codes (Gupta et al., 2018; Acheampong et al., 2018; Okaily et al., 2023; de Blanes Sebastian et al., 2023). In Okaily

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et al.'s research, (2023) said that electronic resource infrastructure and knowledge of the Indonesian people are not important barriers to the acceptance of digital payment methods. However, the results of this study are not in line with what was reported in several previous studies in the field of information systems (Venkatesh et al., 2012 and Xu Paris et al., 2023).

Social influence (SI) is the extent to which an individual feels the importance of others to believe that he should use new technology (Venkatesh et al., 2012). In a digital era that is all practical and fast, non-cash payment methods are becoming an increasingly popular trend in Indonesian society. One of the widely used non-cash payment methods is using the QRIS payment channel. Social influence (SI) can come from various sources, family, peers, neighborhood, and workplace. When people closest to them or who are considered important start using QRIS, individuals will tend to feel encouraged to follow using the QRIS payment channel during transactions. The findings of this study are in line with the results of previous studies which state that social influence (SI) has a significant effect on behavioral intention in using digital payment channels such as QRIS (Venkatesh et al., 2012; Al-Saedi et al., 2020; de Blanes Sebastian et al., 2023; Al-Sabaawi et al., 2023; Ifada et al., 2022). According to several researchers Al-Sabaawi et al., 2022 said that people who are important to respondents, peers, family, work environment, and the surrounding environment can influence an individual to use digital payment methods.

Trust (TR) is a subjective belief for those who take an attitude towards requirements and obligations. In the field of financial transactions when users are more exposed to risks arising from uncertainty and lack of control, trust is relevant (de Blanes et al., 2023). In the increasingly sophisticated digital era, non-cash payments are becoming a trend and in the process of adoption and use of QRIS, trust (TR) plays an important role in shaping people's behavioral intentions. This trust includes the QRIS system itself and trust in digital payment service providers. Trust in using the QRIS payment channel can be understood that non-cash transactions involve the exchange of sensitive financial information and data. Therefore, users must believe that the QRIS system is safe, reliable, and protected from the risk of fraud and data leakage. The results of this study are in line with previous research in the context of electronic transactions, where they recognize the importance of trust (Al-Saedi et al., 2020; Kanojia and Lal, 2020; Taman et al., 2019; Shao et al., 2019; Al-Sabaawi et al., 2023) This shows that through trust, everything related to individuals can be maintained to use new technology, especially in using the QRIS payment channel. According to Al-Saedi et al., (2020) the higher the trust in the M-payment method, the higher the positive behavioral intention to use the method. Therefore, the QRIS payment channel service must always build trust in consumers who have used it to maintain the positive behavioral intentions of QRIS users.

Habit (HA) is the extent to which people tend to use a technology in their activities (Venkatesh et al., 2012). The habit factor has a significant effect on the intention to use the QRIS payment channel because habits are automatic responses that lead to certain goals. Habits are created by constantly performing the same actions and without spending much thought or rational analysis (Gardner and Rebar, 2019). When a behavior becomes a habit it becomes automatic and decisions are made without awareness. Especially when the action leads to achieving the expected goal, it will stimulate them to have more intention to perform an action, which in this context is using the QRIS payment channel. The habit of the experience of using the QRIS payment channel is likely to strengthen one's intention to use the QRIS payment channel. Because the penetration of digital technology has encouraged most people to be technologically literate, and its use has become part of their lives and habits. Over the past two decades, people have been exposed to the internet and mobile technology both at work and at home, and they tend to use technology more often to fulfill their daily activities (Aswani et al., 2018). Based on this, it can be concluded that the habit of using the QRIS payment channel can increase the influence of the intention to use the QRIS payment channel technology. The results of this study are in line with the results of previous studies which state that habit (HA) can influence behavioral intentions in using payment channels with QR codes (de Blanes Sebastian et al., 2023; Tam et al., 2020; Khatimah et al., 2019; Pradhan and Mishra, 2019; in Al-Sabaawi et al., 2023). Experience in using technology as a result of using previous technology so that technology users have become their habits. Research conducted by Venkatesh et al. (2012) shows that each construct in the UTAUT2 model including habit affects behavioral intention and use behavior. The results of this study are in line with the results of previous studies which state that habit (HA) can influence behavior in using payment channels with QR codes (Fatihanisya et al., 2021; Baptista, G., and Oliveira., 2015; Martines B. M., and McAndrewa L. E., 2023). The habit of using the QRIS payment channel and positive experiences make users always want the QRIS payment channel when making non-cash transactions.

Behavioral intention (BI) is the extent of individual willingness and effort to perform the underlying behavior (Venkatesh et al., 2012). The results of this study are in line with the results of previous studies which state that behavioral intention (BI) affects use behavior (UB) in using payment channels with QR codes (Patil Push et al., 2020; Sivathanu., 2019; Alaeddin et al., 2018; Kumar et al., 2018; Suo Wen-Jing et al., 2022). The factors of convenience, trust, social influence, habit, and perceived risk are factors that increase user intention to use the QRIS payment channel and become one of the factors that must be considered.

VI. CONCLUSIONS

The results showed that of the nine hypotheses proposed, there were two hypotheses, namely, the effect of performance expectancy (PE) on behavioral intention (BI) and the effect of facilitating conditions (FC) on behavioral intention (UB) and perceived risk (PR) had a negative effect on behavioral intention (BI). Another finding is that perceived risk (PR) has a negative effect on the intention to use the QRIS payment channel, which means that the higher the risk of using the payment channel, the smaller the

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intention to use. Effort Expectancy (EE), Trust (TR), Social Influence (SI) factors have a positive effect on Behavioral Intention (BI) in using the QRIS payment channel. The results also found that Habit (HA) has a positive effect on Behavioral Intention (BI) and Use Behavior (UB) in using the QRIS payment channel. It is proven that a habit of using the QRIS payment channel triggers users to continue to always use the QRIS payment channel in making transactions. Behavioral Intention (BI) affects Use Behavior (UB), it is proven that the intention to use the QRIS payment channel triggers someone to try and use it, supported by convenience, comfort, security, trust, benefits and social factors.

VII. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Sampling in this study uses the distribution of the population of Indonesia, for future research it is recommended to use a sample of QRIS payment channel user data in Indonesia with the target respondents being the millennial generation and generation Z. Future research can look at other variables such as perceived benefits, attitude, privacy, and security and add the moderating effects of age, gender, and culture. The following research can also be conducted in different regions to find out whether performance expectancy and facilitating condition variables can affect behavioral intention.

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