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Determinant of Intention to Use the Quick Response Code Indonesian Standard at Indonesian Sharia Bank

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Abstract: The main objective of this study is to analyze and predict the determinants of behavioral intention and behavior in using the BSI QRIS. This study develops a Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), tailoring the constructs of self-efficacy and trust into the UTAUT2 model to predict the effect of belief in strengthening or weakening efficacy on intentions to use the BSI QRIS. The study sample comprises 204 customers who use BSI mobile banking throughout Indonesia. This study employs a quantitative approach with structural equation Model (SEM) as the analysis model using Smart PLS software, version 3.0. The results indicate that performance expectations and habits have an invaluable and significant effect on intentions to use the BSI QRIS. Meanwhile, effort expectations, social influences, facilitating conditions, hedonic motivation, price value, and self-efficacy were futile variables for the pertinent case. Trust cannot nourish the self-efficacy effect on intentions to use the BSI QRIS. The intention to use has a significant effect on behavior. This study is unique because it uses UTAUT2, a model that has never been used to estimate the BSI QRIS customer uptake. Therefore, the findings of this study are expected to contribute to forecasting a more detailed model of consumer behavior from an Islamic perspective, particularly in the context of behavioral intention to use the BSI QRIS.



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Keywords: Unified Theory of Acceptance and Use of Technology 2; trust; self-efficacy; Quick Response Code Indonesian Standard; Bank Syariah Indonesia

印度尼西亚伊斯兰教银行使用快速响应代码印度尼西亚标准的意愿决定因素

摘要：本研究的主要目的是分析和预测使用BSI

QRIS的行为意图和行为的决定因素。本研究开发了技术接受和使用统一理论2

(UTAUT2)，将自我效能和信任的构造调整到UTAUT2模型中，以预测信念对使用BSI

QRIS意图的增强或减弱效能的影响。研究样本包括204名在印度尼西亚各地使用BSI手机银行的客户。本研究采用定量方法，以结构方程模型 (SEM) 作为分析模型，使用智能PLS软件3.0版。结果表明，绩效期望和习惯对使用BSI

QRIS的意图具有不可估量且显著的影响。同时，努力期望、社会影响、便利条件、享乐动机、价格价值和自我效能对于相关案例来说是无用的变量。信任不能促进自我效能对使用BSI QRIS意图的影响。使用意图对行为有显著影响。这项研究的独特之处在于它使用了UTAUT2，这是一个从未用于估计BSI

QRIS客户接受度的模型。因此，这项研究的结果有望从伊斯兰角度预测更详细的消费者行为模型，特别是在使用BSI QRIS的行为意图的背景下。

关键词：技术接受与使用统一理论2；信任；自我效能；快速反应码印度尼西亚标准；印度尼西亚伊斯兰银行

1. Introduction

In the current era of globalization, technological developments continue to change. This is calibrated by the emergence of various human activities that involve technology [1]. With the increase in information systems, technological advancement has had an impact on various actual movements in various fields [2]. One is in the financial sector, where, for example, the Islamic banking industry must act swiftly and innovate continuously to compete with its strongest competitor, the conventional banking industry. Banking has adopted technologies to facilitate system operation, including mobile banking. Mobile banking applications, notwithstanding their complexity, are a type of information systems. Technical facilities enhance people's confidence in and efficacy of executing transactions [3].

Mobile banking is an Islamic banking facility that enables online financial transactions using telecommunication devices such as smartphones. Through smartphones, customers can access services, such as balance information, transfers, bill payments, changing PINs, and requesting account statements or mutations [4]. m-Banking has many features for transferring money, checking balances, making payments, making purchases, and scanning

installments with the Quick Response Code Indonesian Standard (QRIS). QRIS innovation is a type of two-dimensional barcode that contains information that can be read horizontally or vertically from various directions. This feature is a QR Code standard managed by Bank Indonesia and the Indonesian Payment System Association (ASPI) for Indonesian payment systems through online applications such as mobile banking, e-wallets, and other electronic money [5].

According to the Kontan.com report and the statement by the governor of Bank Indonesia, Perry Warjiyo, digital economic and financial transactions are flourishing with the increasing expectations and preferences of Indonesian citizens in shopping online, as well as the convenience of digital payments to accelerate digital banking. In April 2022, the value of electronic money financial transactions increased by 50.3% year on year (yoy), reaching Rp. 34.3 trillion. The value of digital banking transactions was 71.4%, which is consistent with years to Rp. 5,338.4 trillion, while the value of payment transactions using ATM cards, debit cards, and credit cards also increased by 12.5% annually to Rp. 764.5 trillion [6]. It has been demonstrated that QRIS users are still growing, and communities continue to transact using ATMs and credit and debit cards, rather than QRIS. Digital

banking progress is also supported by QRIS, where Bank Indonesia noted that, as of May 2022, the number of QRIS merchants had exceeded 18.7 million and 90% of MSME merchants had expanded and were digitally connected [7].

The rapid advancement of information technology has altered people's habits and actions in various ways. Like Indonesia's rapidly expanding Islamic banks, more people using QRIS will lead to an increase in QRIS transactions. The QRIS transaction value exceeded Rp. 7.5 trillion in April 2022, according to Bank Indonesia [8]. In June 2022, there were 4.07 million BSI Mobile users, an increase of 81% on an annual basis. At that time, there were overall 117.72 million BSI Mobile transactions, which helped to generate Rp 119 billion in fee-based revenue. The quantity of BSI QRIS transactions has also grown from January to June 2022, with 2.7 million BSI QRIS transactions amounting to Rp. 524 billion. This number is significantly greater than it was during the same period last year, when there were just 459 thousand transactions totalling Rp. 37 billion. [9]. These data show tremendous breakthroughs and innovations in digital banking. Indonesia has the largest Muslim population worldwide. due of its large Muslim population, which numbers 237.53 million, or 86.9% overall total population of 273.32 million [10]. As a result, Islamic banks have the opportunity to advance digital banking by competing to offer customer services that are secure, convenient, and effective [11].

The aspirations and behaviors of people who utilize technology are understood through various theories. One is the Unified Theory of Acceptance and Use of Technology (UTAUT) [12], which focuses on how people use technology in user situations. Based on the theory of behavior and acceptance of technology use, UTAUT elaborates eight theories of technology acceptance: Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Social Cognitive Theory (SCT), Technology Acceptance Model (TAM), Innovation Diffusion Theory (IDT), PC Utilization Model (MPCU), Motivation Model (MM), and Combined TAM and TPB (C-TAM-TPB). Four factors—performance expectations, effort expectations, social influence, and facilitating circumstances—are considered by the UTAUT model to determine user behavior intentions [12]. The unified performance expectancy construct is associated with five separate constructs and corresponding theories: perceived usefulness (TAM and TAM2), job fit (MPCU), extrinsic motivation (MM), relative advantage (IDT), and outcome expectations (SCT). UTAUT accounts for 70% of the intention to use technology compared to the other eight theories [7].

A person's behavioral intention to use technology and the usage of technology, particularly within the

context of the organization, is viewed according to UTAUT theory. Venkatesh established the UTAUT model in 2012 by incorporating three more constructs—hedonic motivation, price value, and habits—with the goal of integrating its consumer environment and overcoming the weaknesses of the UTAUT model. The ameliorated model, also known as the UTAUT2 model, allows for the incorporation of age, gender, and experience as moderators of the suggested relationship in the use of behavioral intentions, implementing the analysis of consumer technology use in voluntary contexts [12]. According to the Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2), performance expectations are the preeminent predictor of information technology use intentions. However, information technology use intentions are also influenced by other factors, including effort expectations, social factors, facilitating conditions, hedonic motivation, price values, and habits.

Intention to use the BSI QRIS was the core subject of this study. This research is interesting because UTAUT2 modeling involves several objects, including digital wallets [12], mobile banking [13, 14], mobile payment [15], mobile learning [16], and electronic market applications [17]. However, there is a paucity of research on QRIS payment transactions.

The elements of UTAUT2 theory—performance expectations, effort expectations, social influence, facilitating conditions, hedonic motivation, price values, habits, and other supplementary variables—were used in this study. These additional variables include self-efficacy as an independent variable and trust as a moderating variable of self-efficacy regarding intentions to use the system and usage behavior. Ultimately, to determine whether users of the BSI bank are interested in availing themselves of BSI QRIS, this research addresses the issues pertaining to the UTAUT2 theory.

2. Literature Review and Research Hypotheses

2.1. Background Theory

Quick Response Code Indonesian Standard (QRIS) is a QR Code standard for Indonesian payment systems that is used for payments through online services, including mobile banking, e-wallets, and other electronic money. The QRIS is governed by Bank Indonesia and the Indonesian Payment System Association (ASPI). If you participate in specific transactions, QRIS can store details about your personal identity and provide access to the amount of your payment. A two-dimensional barcode, QRIS, enables users to read information in several directions [6].

In the beginning, Indonesia still deployed QR for

installment, but on August 17, 2019, Bank Indonesia (BI) upgraded the QR system to QRIS, renewing it to the payment system in all QR applications. As a result, merchants affiliated with Payment System Service Providers (PJSP) can benefit from QRIS. The QRIS uses Merchant Presented Mode (MPM) and Customer Presented Mode (CPM). Consumers can only scan QR codes on a QRIS at the merchants that provide it. Merchants who use online platforms such as LinkAja, GoPay, OVO, Dana, and Bukalapak can use the QRIS to pay for shopping transactions or bills. QRIS transactions have a maximum limit of 10 million per transaction. Issuers can set daily and monthly cumulative nominal limits on the condition that they have considered risk management.

The system has provisions as guidelines for implementing the QRIS. Bank Indonesia issued Regulation for Members of the Board of Governors No. 21/18/PADG/2019 concerning the application of the National Standard Quick Response Code for payments. and Member of the Board of Governors No. 24/1/PADG/2022, dated February 25, 2022, concerning the second amendment to the first regulation. To ensure that the QRIS runs according to the regulations. Regarding mobile banking payments with the BSI QRIS feature, if individuals have a favorable opinion and faith that mobile banking can offer advantages, convenience, reliable infrastructure, support, and reliability from others to fully enjoy the function of m-banking features, the benefits outweigh the costs. With ease of use, people are inclined to operate the BSI QRIS on mobile banking.

The desire to use technology can affect users' perceptions of m-banking. One of these theories is the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al., which concerns the use and utilization of technology in user' settings. UTAUT is a theory tailored to the idea of a person's behavioral intention to use technology and the use technology, especially within the scope of the organization. The UTAUT was developed by Venkatesh [12] by adding three constructs, hedonic motivation, price value, and habits, which aim to integrate the consumer context and overcome the limitations of the UTAUT model. This modification of the model is also called the UTAUT2 model, which makes it possible to analyze the use of consumer technology in voluntary settings with the integration of age, gender, and experience as moderators of the proposed relationship in the use of behavioral intentions [12]. UTAUT 2 shows that performance expectations serve as the strongest predictor of information technology use intentions; however, information technology use intentions are also influenced by factors such as effort expectations, social factors, facilitating conditions, hedonic motivation, price values, and habits.

There are inconsistencies in the variables used in previous studies; performance expectations, effort expectations, facilitating conditions, and price values can support one's intention to use technology [15, 18], while social influence, hedonic motivation, and habits are fruitless. In contrast, variable habits, hedonic motivation, and social influences prompt a person's intention to use technology, whereas other UTAUT2 variables do not indicate a person's intention to use technology [19]. Performance expectations, price values, facilitating conditions, hedonic motivation, and habits become factors in one's intention to use technology; however, the other two variables do not affect the formation of one's intention to use technology [3].

In the setting of payments through mobile devices, most of the BSI QRIS features, when individuals possess an excellent view and believe that mobile banking can provide benefits, practicality, infrastructure support, and assurance from other people and value their use of any mobile banking functions, the benefits are greater than the fees, and with the comfort of using, a person will be driven to use the feature on m-banking.

2.2. Hypothesis Development

2.2.1. Performance Expectations

Performance expectations tended to be the most powerful predictor of user behavioral intention in the UTAUT framework. In general, performance expectations play a crucial role in helping people achieve better job performances. These expectations are the degree to which a person accepts that using the system will benefit him in carrying out work [12]. When users believe that using a particular mobile technology can improve their living standards and provide them with more utility, they are more motivated to adopt it. Based on the findings of [20], performance expectations affect interest in using QRIS as a payment method. Previous studies found that performance expectations affect the intention to use a technology system [4, 21, 23]. Therefore, based on the above description, the following hypothesis is proposed:

H1: Performance expectations have a positive effect on intention to use the BSI QRIS.

2.2.2. Effort Expectation

Effort expectation is the extent to which a person believes in the level of innovation [12]. This variable was formulated from three basic constructs in the previous theory, namely, perceived practicality from the TAM model. Effort expectation is also key to someone interested in deploying technology. The simpler an application, the more captivated people will

be in using technology. Preliminary studies have found that effort expectation become a factor influences intention to use technology [4, 24]. Therefore, the following hypotheses are proposed:

H2: Effort expectations have a positive effect on the intention to use a BSI QRIS.

2.2.3. Social Influence

In this context, social influence refers to when individuals feel that their surroundings affect them to consider using mobile banking or electronic payments. A person's behavior is shaped by their social influence of mutually maintaining peace or harmony in groups [19]. Following earlier findings, the results imply that mobile banking adoption is affected by social influences [11, 25]. Based on the above description, the following hypothesis is proposed:

H3: Social influence has a positive effect on intention to use the BSI QRIS.

2.2.4. Facilitating Conditions

Facilitating conditions are a person's measurement of the organizational and technical infrastructure that exists to support system use [26]. This condition refers to the availability and accessibility of resources that encourage the adoption of certain behaviors [12]. This condition also provides a sense of individual psychological control that influences their willingness to accept certain behaviors and is largely influenced by a person's cultural, social, and technological background [19]. indicates conditions that facilitate having an influence user intentions [27, 28]. Thus, based on the description above, some hypotheses that can be used include the following:

H4: Facilitating conditions have a positive effect on intention to use the BSI QRIS.

2.2.5. Hedonic Motivation

Hedonic motivation is defined as pleasure or happiness derived from using technology [12]. Hedonic motivation (intrinsic motivation or perceived enjoyment) plays an important role in increasing users' intentions to accept new technology. This means that users are more likely to use technology that looks entertaining and has unique and creative tools and functions. According to previous research, hedonic motivation has a positive effect on intention to use [28, 30]. Thus, based on the description above, some hypotheses that can be used include the following:

H5: Hedonic motivation has a positive effect on intention to use the BSI QRIS.

2.2.6. Price Value

According to [12], the benefits and costs of using mobile banking, such as Internet fees, bank service fees, and transaction costs, must be balanced. A

positive price value means that the benefits outweigh the monetary costs [25]. Research that gets the results A price value that has a positive influence on the intention to use a technology that is [14]. Thus, based on the description above, some hypotheses that can be used include the following:

H6: Price value has a positive effect on the intention to use the BSI QRIS.

2.2.7. Habit

Habit is the extent to which a person performs a behavior repeatedly because of learning [29]. Habits explain how people react to technology and how they use it automatically after learning. This is also related to experience, where experience over the course of chronological time can form different levels of habit; in other words, experience can reflect the result of a habit [30]. The intention to use technology can be influenced by habits [11, 29]. Following this statement, the current hypothesis is:

H7: Habits have a positive effect on the intention to use the BSI QRIS.

2.2.8. Self-Efficacy

Self-efficacy refers to a personal belief in the ability to complete work related to that competency [31]. Thus, if someone has high self-efficacy, they can influence others to do something. Similar to previous findings, self-efficacy influences entrepreneurial intention [32]. Thus, our next hypothesis is as follows:

H8: Self-efficacy has a positive effect on the intention to use the BSI QRIS.

2.2.9. Behavioral Intention

Behavioral intention is when an individual's behavior influences the actual usage behavior of a person's technology [12]. Many studies support the notion that behavioral intention impacts usage behavior in the banking sector. Behavioral intention is a predictor of customer usage behavior in banking. This finding corresponds to previous investigations, proving that behavioral intention is propitious for the usage behavior variable [12, 26, 30]. Therefore, based on the description above, the following hypothesis can be used:

H9: Intention to use has a positive effect on BSI QRIS usage behavior.

2.2.10. Trust

Trust is an important element in the process of fixing and embracing relationships despite the difficulty in managing it. Trust is an important element in building complementary connections. With someone's belief in a pervaded phenomenon, in this case, technological security, it can lead to an intention to use it. Faith has an interconnected relationship with

self-efficacy, depicting that a person has the ability to perform and complete work related to that competency [33].

However, in several studies, self-efficacy was found to have an inverse correlation with intention [34]. The presence of trust, which demonstrates the variable, has proven to be an important component in initiating intentions to use QR Code digital payments, and has a significant effect on the intention to use technology, showing a positive intermediary between self-efficacy and the intention to use QRIS [32]. Therefore, the trust hypothesis is as follows:

H10: Trust can strengthen the effect of self-efficacy on intention to use the BSI QRIS.

2.3. Theoretical Framework

From the hypotheses, the theoretical framework we adopt for this study has the following form:

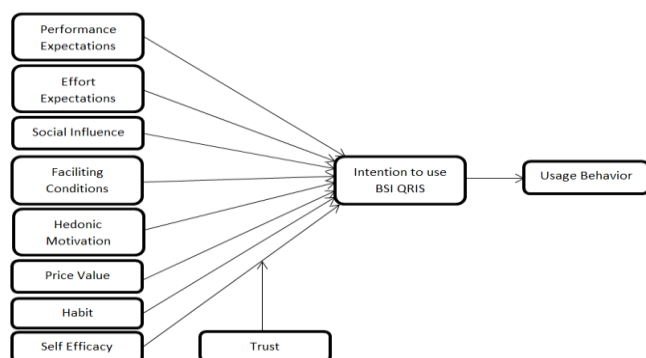


Figure 1. Research models (The authors' elaboration)

The model used in this study was derived from the UTAUT2 model developed in [12] with self-efficacy as the exogenous variable, and trust as the moderating and additional variables. Figure 1 illustrates the research model.

3. Research Methods

This study was a descriptive quantitative analysis of primary data, and the participants were Indonesians. Convenience sampling was used in this investigation [38]. This method could meet the research requirements if the participants fit the source of the information [39]. Therefore, the researcher considered the following criteria: 1. Age over 17 years and technologically proficient 2. people who frequently use BSI Mobile; 3. People who have BSI Mobile applications. 4. People who have insight into QRIS. Data were collected in an online format using Google Forms and distributed through social media such as WhatsApp, Facebook, and Instagram advertisements to obtain 204 respondents.

This study used primary data obtained from the questionnaires. Questionnaires are research tools that

consist of a series of questions to gather information from the respondents. The questionnaires were distributed through online surveys on social media. The questionnaire consisted of demographic profiles of respondents and questions for the variables studied, namely performance expectations, effort expectations, social influence, facilitating conditions, hedonic motivation, price value, habits, self-efficacy, trust, intentions to use the BSI QRIS, and usage behavior. The respondents' responses were measured using a Likert scale consisting of 5 points, from 1 (strongly disagree) to 5 (strongly agree). This study applied the SEM-PLS path modeling to the Smart PLS application.

The questionnaire items were adopted from previous research and modified by the authors for a context that is adequate for this study. The questions on performance expectations, effort expectations, social influence, facilitating conditions, hedonic motivation, price value, and habits were adopted from [12]. Self-efficacy questionnaire items were adopted from previous research [35], the questionnaire items on beliefs and behavioral intentions were adopted from previous research [36], and the behavioral usage items were adopted from previous research [37].

The questionnaire was developed based on previous studies and was adjusted according to the relevant context in this study. All statements were given to the respondents, and they were asked to choose these statements based on a 5-level Likert scale. After acquiring answers from respondents, the data were used for analysis in this study, as shown in Table 1.

Table 1. Measurement items for research variables (The authors' elaboration)

Variables	Question
Performance Expectations	1. The BSI QRIS feature is very useful when I make shopping payments in my daily life.
	2. The BSI QRIS feature increases productivity in my payment transactions.
	3. Using BSI QRIS helps me complete payment transactions faster.
	4. The BSI QRIS feature can complete my important payment transactions
Effort Expectations	1. I can easily learn how to use the BSI QRIS feature
	2. I can easily understand how to use BSI QRIS for my payment transactions
	3. I can easily use BSI QRIS to pay for transactions that I make
	4. I am skilled in using BSI QRIS to pay for transactions that I make
Social Influence	1. The people around me recommend using BSI QRIS in payment transactions.
	2. I was advised to use BSI QRIS for payment because the people around me use it too.
	3. Someone important to me

	suggested I use BSI QRIS for payments.
Facilitating Conditions	1. I have sufficient knowledge about BSI QRIS.
	2. Technology facilities and infrastructure at BSI QRIS are commonly used.
Hedonic motivation	1. In my opinion, using the BSI QRIS feature in payment transactions is fun.
	2. I think the BSI QRIS feature in payment transactions is entertaining.
Price Value	3. In my opinion, the BSI QRIS feature in payment transactions is interesting.
	1. I think that when using BSI QRIS, it has low admin fees.
	2. In my opinion, the fee set in the BSI QRIS feature is very affordable.
Habit	3. In my opinion, the fee set by BSI QRIS for payment is commensurate with the benefits it provides.
	1. I am used to using the BSI QRIS feature.
Self-Efficacy	2. In any payment, I have to use BSI QRIS.
	3. I feel it is more effective and reliable to use BSI QRIS for payments.
Trust	4. In my opinion, the BSI QRIS feature has become a trend and commonplace among the public.
	1. I have confidence in my ability to take action and overcome obstacles in using the BSI QRIS.
Intentions to use	2. If there is a problem with my BSI QRIS feature, I'm sure I can solve it properly.
	3. I have good experience completing payment transactions with BSI QRIS.
Usage Behavior	1. I believe the BSI QRIS feature can be trusted if used.
	2. I believe my payment transaction with BSI QRIS will run smoothly.
	3. I believe payment transactions with BSI QRIS can be trusted for security.
	4. I believe BSI QRIS will try to provide the best service in my transaction.
	5. I believe in the BSI QRIS system.
	1. I will try to use the BSI QRIS feature for my payment transactions.
	2. I think I will be using BSI QRIS for my payment transactions in the next few months.
	3. I plan to continue using the BSI QRIS feature in my payment transactions.
	1. I prefer to make payments through BSI QRIS over other methods.
	2. I am satisfied using BSI QRIS for my payment transactions.
	3. I am willing to recommend other people use BSI QRIS in their payment transactions.

To test the research hypothesis, the PLS SEM method was used in research with reasons for

developing theory and explaining variance [40]. Table 2 contains information on latent variables and indicators. The calculation used SMARTPLS 3.0 software, Calculation procedure was as follows: 1) Evaluation of the Outer Model. 2) Evaluation of inner model (structural model) [38, 40].

4. Results

4.1. Respondents

The presentation of the research results begins with an overview of the respondents' data, followed by a general selection of variables and a descriptive analysis of the variables and their relationship to the intention to use the BSI QRIS. Of the 204 respondents, the majority were women (60%) compared to men (40%). In terms of age, the largest age group was 23-28 years old (45%), followed by 17-22 years old (29%). The third largest age group was 29-34 years, accounting for 16%, and the smallest age group was more than 34 years, accounting for 10%. In terms of work, the majority of respondents were students (33.3%), the second largest group had private employee jobs (24%), the third largest job was an entrepreneur (14.7%), other jobs were in the fourth largest position, the fifth largest was a housewife household (9.80%), and the smallest job was civil servants (4.90%).

In terms of income, the majority of respondents received less than Rp. 2,000,000 (57%), the second-highest income is in the range of Rp. 2,000,000–Rp. 5,000,000 (34%), and the highest income is in Rp. 5,000,000–Rp. 8,000,000 (9% of the respondents). The respondents in this study used mobile banking in diverse periods; 58% of them used the system for less than a year, 25% for to 2-3 years, and 17% for more than three years. Furthermore, the frequency of respondents using QRIS was classified as never, several times, and often using it. We found that the majority of respondents used QRIS several times (57%), followed by never and often used QRIS (30% and 13%, respectively).

4.2. Evaluation of the Measurement Model (Outer Model)

This study used PLS path modeling to analyze the data. Based on variations, the structural modeling technique has met the expectation of measuring structural models; it can incorporate small sample sizes and can also be used to validate and test models [40]. There are two steps in the analysis using PLS modeling: assessment model measurement and the structural assessment model. The research measurement model was determined by convergent validity, discriminant validity, and composite reliability. The external load for each latent variable was considered sufficient at 0.7 or more. Therefore,

this study met the individual item reliability criteria. Table 2 shows that the results of the outer loadings exceeded 0.7, which indicates that these questions can represent latent variables.

Table 2. Convergent validity (The authors' elaboration)

Variable	Code	Loadings	Description
Performance Expectations (X ₁)	X1.1	0.863	Valid
	X1.2	0.868	
	X1.3	0.844	
	X1.4	0.770	
Effort Expectations (X ₂)	X2.1	0.873	Valid
	X2.2	0.912	
	X2.3	0.898	
	X2.4	0.856	
Social Influence (X ₃)	X3.1	0.924	Valid
	X3.2	0.934	
	X3.3	0.864	
	X4.1	0.852	
Facilitating conditions (X ₄)	X4.2	0.912	Valid
Hedonic Motivation (X ₅)	X5.1	0.891	Valid
	X5.2	0.849	
	X5.3	0.885	
Price Value (X ₆)	X6.1	0.896	Valid
	X6.2	0.892	
	X6.3	0.911	
Habit (X ₇)	X7.1	0.778	Valid

Self-Efficacy (X ₈)	X7.2	0.895	Valid
	X7.3	0.902	
	X7.4	0.800	
	X8.1	0.857	
	X8.2	0.876	
	X8.3	0.835	
Trust (Z)	Z.1	0.790	Valid
	Z.2	0.830	
	Z.3	0.885	
	Z.4	0.849	
	Z.5	0.864	
Intention to use (Y ₁)	Y1.1	0.876	Valid
	Y1.2	0.909	
	Y1.3	0.894	
Usage Behavior (Y ₂)	Y2.1	0.872	Valid
	Y2.2	0.878	
	Y2.3	0.821	

Convergent validity can be observed through the loading factor value, which is accepted if the loading factor value is above 0.7 [40]. Table 2 shows that all indicators meet the convergent validity requirements, where the construct loading value is greater than 0.70. All indicators fulfilled the discriminant validity requirements because the cross-loading value was higher than the specified loading factor value.

Table 3. Composite reliability and AVE (The authors' elaboration)

Variable	Cronbach's Alpha	Composite Reliability	AVE	Description
X1	0.858	0.903	0.701	Valid and Reliable
X2	0.908	0.935	0.783	
X3	0.893	0.933	0.824	
X4	0.719	0.875	0.779	
X5	0.848	0.907	0.766	
X6	0.883	0.927	0.810	
X7	0.866	0.909	0.715	
X8	0.818	0.892	0.733	
Y1	0.873	0.922	0.798	
Y2	0.821	0.892	0.735	
Z	0.899	0.925	0.713	

Composite reliability is adopted to determine the output of latent variable coefficients, and it has two criteria: composite reliability and Cronbach's alpha. To be considered valid and reliable, both criteria must have a value above 0.70 to be considered valid and reliable [41]. The Average Variance Extracted (AVE) value must be at least 0.50. The results in Table 3 show that the composite reliability and Cronbach's alpha values were all greater than 0.70. All the AVE values were greater than 0.50. Therefore, all of them are approved to be valid and reliable, and can be continued for further testing.

4.3. Evaluation of the Structural Model (Inner Model)

The coefficient of determination primarily measures the model's ability to explain dependent variation. This structure is called the R-squared value, which predicts

the relationship between the latent variables. An R-square value of 0.75 is in a strong category, an R-square value of 0.5 indicates a medium category, and an R-square value of only 0.25 indicates a low category [41].

Table 4. R-square (R²) and R square adjusted (Q²) (The authors' elaboration)

Variable	R-Square	R-Square Adjusted
Intention to use	0.649	0.631
Usage Behavior	0.530	0.527

Table 4 demonstrates that the R-square (R²) value for intention to use and usage behavior is in the medium range, by a value greater than 0.5. It can be concluded that every independent variable collectively accounted for 64.9% of the effect on intention, while the remaining 35.1% was attributed to untested

variables. Similarly, the intention to utilize results in a 53% influence on using behavior, while the rest (47%) is impacted by untested factors in this research. The Q2 value can be used to predict the importance of the independent variable to the dependent variable [40].

The Q2 value of the intention to use variable was 0.631, and that of the use behavior was 0.527, both of which were above the minimum threshold value of 0. This proves that the values were accurately replicated, enabling the model to make accurate predictions.

Table 5. Path coefficients and hypothesis testing (The authors' elaboration)

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Value
PE	0.197	0.178	0.087	2.277	0.023
EE	0.047	0.050	0.103	0.456	0.649
SI	-0.154	-0.139	0.079	1.955	0.051
FC	0.021	0.023	0.085	0.243	0.808
HM	0.008	0.029	0.113	0.072	0.942
PV	0.078	0.069	0.083	0.941	0.347
H	0.352	0.352	0.121	2.904	0.004
SE	0.096	0.103	0.093	1.031	0.302
IU	0.728	0.733	0.054	13.538	0.000
SE*T*IU	0.137	0.114	0.072	1.902	0.303

Looking at the findings of the trajectory test, variables with a P-value of less than 0.05 are performance expectations, habits, intention to use, and use behavior, demonstrating a significant influence on the purposes of using the BSI QRIS system (Table 5).

5. Discussion

The first hypothesis asserted that the variable performance expectations had a beneficial impact on the desire to use the BSI QRIS. The p-value for performance expectations is 0.023, which implies that the first hypothesis is accepted. Someone who considers his employment to be facilitated while utilizing technology will exhibit enthusiasm for employing the device and use it continually because of the advantages he has received. Moreover, in this investigation, the occupation status of the respondents as housewives, private workers, and public servants—as many as 110 entrepreneurs—is those who already have their own income, so having a BSI QRIS will definitely help them streamline their work in terms of payments. This is in line with previous research showing that performance expectations have an effect on the intention to use a technology system [4, 21-23].

The second hypothesis proposes that effort expectations have a positive effect on the intention to use the BSI QRIS, with a p-value of 0.649. This number indicates that the second hypothesis is rejected and not supported by previous research. Customers' expectations of effort will vary depending on their skills, and more experienced BSI QRIS users will find it easier to use the technology. Skills in implementing technology relate to their experience, so we can observe the frequency with which customers access BSI QRIS here; consumers who have not used it are 30%, and those who have used it repeatedly are as much as 57%. At this point, it can be inferred that consumers rarely utilize BSI QRIS; consequently, expertise in utilizing BSI QRIS is needed. However, in

Imani's research [20], causing effort expectations to have no effect on the intention to use the QR code, specifically the statement that it was easy to use the QR code, which is possible owing to the advancement of the digital era, where most things are online and they are already familiar with using existing technology. Therefore, the level of difficulty in utilizing technology, particularly effort expectations, is not a determinant of the behavioral intention to use the QR Code feature in mobile payments.

The third hypothesis proposes that social influence has a positive effect on the intention to use the BSI QRIS, with a p-value of 0.051. This finding indicates that the third hypothesis has been rejected and is not supported by the results of prior studies. In this study, most of the respondents were aged 23–28 years, at which time they were already in the financially independent stage; it can be seen that in the respondents' jobs, there were a total of 90 people, or 44%, who have served as civil servants, private employees, or entrepreneurs and had become dependent on technology that facilitates their work. In addition, customers who are less prone to accepting ideas from others or the trend of others embracing BSI QRIS as a payment method are conceivably caused by themselves and are more personal and susceptible to being known by others. Previous findings, which are consistent with the results of this investigation, suggest that social influence does not alter the intention to use technology [20, 42].

The fourth hypothesis asserts that facilitating conditions have a positive effect on the intention to use the BSI QRIS, and the p-value of facilitating circumstances is 0.808, which is rejected and not supported by previous study results. This is due to the unequal distribution of Internet connections in Indonesia, which has a constrained infrastructure and amenities. The findings of this research are in accordance with earlier studies that proved situations

that enable but do not encourage one's inclination to utilize technology [16, 43].

The fifth hypothesis is that hedonic motivation has a positive effect on the intention to use the BSI QRIS, with a p-value of 0.942. This shows that the fifth hypothesis is rejected and not supported by previous research data. Customers are likely to care more about the benefits of using a BSI QRIS for work than whether it is fun, entertaining, or attractive. It is also proven in this study that performance expectations are an important factor in forming intentions to use the BSI QRIS. Therefore, this hedonic motivation variable does not become a supporting variable in forming one's intention to transact using the BSI QRIS. Other studies that obtained the results of hedonic motivation have no effect and have reasons that could be because there is data privacy and things that are confidential, so that many consumers feel insecure using these technology services [44].

The sixth hypothesis posits that price value has a positive effect on the intention to use the BSI QRIS, with a p-value of 0.347. This shows that the sixth hypothesis is rejected and not supported by previous research data. According to the income data, the cost of what is used should be a consideration for the customer, but the customer does not think about the costs incurred because BSI QRIS, if used in terms of payment, has no fees or is free, so customers are free to use it for payment, such as pulses, electricity, online shops, and others. Undoubtedly, there are additional costs. Benefits such as cashbacks or promotions offered by mobile payment applications should influence the intention to adopt QR payment behavior. This is because users feel that cashbacks or promotions are not needed [45]. Regardless of transaction costs, people will continue to use technology because of its unique characteristics, such as convenience, wide availability, and faster service, which offset transaction costs [11, 46].

The seventh hypothesis proposes that habit has a positive effect on the intention to use the BSI QRIS, and the p-value of habit is 0.004, which means that the seventh hypothesis is supported by previous research. In this study, the majority of respondents were between the ages of 23 and 28 and belonged to the millennial generation (Y) or those born between 1981 and 1996. The millennial generation is a society that is literate in technology and has adapted to it. Millennials usually prefer using technology to make all activities easier, including shopping. The habit of this generation before deciding to purchase a product is to seek information first via the internet or social media. As payment technology develops, this generation is often cashless (tends not to carry cash). The convenience of shopping via debit cards, credit cards, e-money, online banking, and others is easily embraced by urban middle-class

millennials. Consequently, the existence of the urban middle-class millennial generation will almost certainly be a catalyst for the growth of cashless payments. The habit of using this technology makes respondents more accustomed to using BSI QRIS or QR codes in other banks. Someone who is familiar with technology and systems is believed to have a lot of potential to adopt new technology even before using it [16]. Therefore, habits play an important role in increasing one's intention to use a BSI QRIS for payment transactions. These results are linked with research showing that habits influence a person's intention to use technology [29].

The eighth hypothesis proposes that self-efficacy has a positive effect on the intention to use the BSI QRIS, with a p-value of 0.302. This shows that the hypothesis is rejected and not supported by previous research data. Based on the data in this study, it can be seen that the majority of respondents worked, namely students (33.3%), and had the highest income, namely less than Rp 2.000.000. Their ability to use less can be because they have less balance in savings or still have more cash than savings balances, which becomes an obstacle to their ability to use BSI QRIS as payment. According to the researchers' findings, despite the fact that 18.7 million MSMEs already have a QRIS, MSMEs in Indonesia still use it inconsistently, for example, in food stalls or other small shops. This means that a person must save more cash than if they maintain a balance in their savings. The results of this study are supported by previous research that found that self-efficacy does not influence intention to use technology [33].

The ninth hypothesis states that the intention to use the BSI QRIS has a positive effect on the behavior of using the BSI QRIS, with a p-value of 0.000. The ninth hypothesis experiment was supported by previous studies. It can also be seen that respondents have had the most mobile banking, namely, less than one year, so that during the development period of QRIS in Indonesia, there is potential for customers to use BSI QRIS. From the frequency of using BSI QRIS, it can also be seen that those who have used it several times more than those who have not remained the same because of limitations in terms of customer income or availability, balances in savings, and infrastructure needed. This finding supports the statement that behavioral intention influences technological use behavior [12, 26, 30].

The tenth hypothesis proposes that trust can strengthen self-efficacy towards the intention to use QRIS, with a p-value of 0.058; thus, the tenth hypothesis is rejected. Based on the data obtained, 42% of customers have had mobile banking for more than two years; therefore, those who use mobile banking decide to trust BSI Mobile. However, BSI QRIS, which

is still fairly fresh, still requires a process, so users have little confidence that using BSI QRIS will proceed swiftly or that there will not be obstacles to their adherence. The results of this study on self-efficacy did not affect customers' intentions to use BSI QRIS due to working conditions that are still student-like and customer convenience, which is still relatively minimal, requiring them to probably still use cash for their payments [34]. Trust, which mediates these unaffected outcomes, also does not improve the impact of self-efficacy on consumers' intentions to use the BSI QRIS. These data imply that an individual's trust in technological advances, together with his trust in how to utilize them, are not variables in employing technology. Therefore, regardless of one's conviction in one's talents and solid faith in technology, it does not alter the urge to employ BSI QRIS.

Customers and banks are encouraged to continue to pay attention to accounting oversight while utilizing the QRIS. Using the Indonesian Standard Quick Response Code (QRIS) can be a solution for preventing condition breaches, as transaction recordings will be made immediately, so it is simpler to confirm. With one QR code, traders of products and services (merchants) do not need to provide various QR codes from numerous providers. Every time a transaction is performed using the QRIS, it is automatically logged and preserved. In this scenario, Bank Indonesia is partnering with PT PTEN (PT National Electronic Transaction Settlement) to ensure the security of the customer data. Transactions implementing QRIS are logged permanently into the system. Additionally, it becomes a testimony regarding transactions if an audit is carried out on the transactions that occur. The use of QRIS is an example of avoiding these circumstances because financial reports become clearer.

6. Conclusion

This study has implications for practitioners and researchers. The UTAUT2 construct was tested for better comprehension of the purpose and utilization of technology, namely the BSI QRIS. This study evaluated new constructs, self-efficacy as an exogenous variable, and trust as a moderating variable in the use of the BSI QRIS. According to these findings, performance expectations and habits have a positive and significant effect on the intention to use the BSI QRIS. Meanwhile, effort expectations, social influence, facilitating conditions, hedonic motivation, price value, and self-efficacy are variables that do not affect the intention to use the BSI QRIS. Trust cannot moderate the effect of self-efficacy on intention to use the BSI QRIS feature. The intention to use it has a significant effect on behavior.

This study has practical ramifications, particularly for banking and the government. The technology

adoption that is most in demand by many people is from a performance perspective; an effective technology will build habits. In this study, performance expectations and behavior were modified by a person's predisposition to use BSI QRIS payments. Therefore, by exhibiting high technological performance and the habit of applying technology, it will be simpler for individuals to use the BSI QRIS. Banking must pay attention to the performance component of the electronic payment technology that they wish to utilize, so that it functions according to the company's targets.

This study has several limitations. First, there were only 204 BSI QRIS user respondents in Indonesia; there should have been a larger sample to see the study's accuracy. Second, the study was solely focused on Islamic bank customers, although the QRIS payment usage service caters not only to Islamic banks, but also to conventional banks and digital wallets. Furthermore, the variables proposed need to be diversified properly to ensure that they are legitimate as new variables and discoveries, not just model adoption.

7. Recommendations

7.1. Practice

The conclusions of this study have several implications, including promoting Quick Response Code Indonesian Standard (QRIS) payments for Indonesian Sharia Bank services and covering performance expectations and behaviors that must be a priority in fostering the growth of QRIS, which focuses on non-monetary factors. Respondents or users must be fully aware that QRIS transactions make payments less complicated; beyond that, merchants may accept payments from any application by simply opening an account at one of the QRIS-organizing PJSPs in this study, the Indonesian Sharia Bank. Thus, the usage of QRIS becomes routine in every payment transaction, and Bank Syariah Indonesia may make it easy for any merchant who hopes to convert to inputting and issuing QR codes. Therefore, every business entity has a QRIS attainable in each registered store. As a greater number of individuals shift to using QRIS, Indonesia's digital economy will expand by 2030.

7.2. Regulators

This study provides a blueprint for all banks, not simply Islamic banks, to extend the digital economy. The widespread use of QRIS may have a significant impact on banks' financial management processes. In all transactions, management accounting is required to assess investments in payment-processing equipment. Management accounting must be operated to estimate installation costs, operations expenses, use risks, and cost-benefit evaluations utilizing the Quick Response Code Indonesian Standard (QRIS). Competent

management accounting can underpin decisions regarding laws and regulations aimed at fostering the establishment of a digital economy.

7.3. Further Research

Future investigations may conduct additional studies, such as selecting different variables to be utilized as a model. The population in this study was also quite large across Indonesia, so further research is needed to determine how representative the samples are in each province equally to reflect its accuracy or to allow for more in-depth research to complement the study.

Declarations

Author Contributions

Conceptualization, A.N.H., A.F. and J.S.; methodology, A.N.H.; software, W.; validation, A.N.H., A.F., J.S. and W.; formal analysis, A.N.H.; investigation, A.N.H. and A.F.; resources, J.S.; data curation, A.N.H.; writing—original draft preparation, W.; writing—review and editing, A.N.H.; visualization, W.; supervision, A.N.H.; project administration, A.N.H. All authors have read and agreed to the published version of the manuscript.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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Conflicts of Interest

The authors declare that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

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