

From wallets to screens: Exploring the determinants of QRIS payment adoption among Millennials in Eastern Indonesia

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ABSTRACT

In response to the global challenges and the demands of the digital revolution, Bank Indonesia launched the Quick Response Code Indonesian Standard (QRIS), a unified payment system designed to enhance convenience and security. Despite these potential benefits, the adoption rate of QRIS has been relatively slow. This study aims to understand the factors driving the adoption of QRIS among Millennials in Eastern Indonesia by examining how attitudes, subjective norms, and perceived behavioral control affect their intention to use QRIS. Using a quantitative approach and Partial Least Squares Structural Equation Modeling (PLS-SEM), we analyzed data from 505 respondents. The findings reveal that attitudes, subjective norms, and perceived behavioral control significantly impact Eastern Indonesian Millennials' intention to adopt QRIS. Interestingly, even though Eastern Indonesia is known for its inadequate digital infrastructure and low digital literacy, these internal behavioral factors are remarkably positive. This indicates that the low penetration of QRIS in the region is mostly due to external factors rather than individual behavioral tendencies.

Keywords: Attitude; Subjective Norms; Perceived Behavioral Control; Intention to Use; Digital Payment Adoption; Theory of Planned Behavior; Millennial

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Introduction

The global growth of mobile and smartphone technology has significantly boosted mobile services, including banking services (Gupta & Arora, 2017). The rapid advancement in mobile technology offers numerous opportunities for the banking industry to facilitate transactions, including the development of digital payment systems that enable customers to conduct transactions conveniently via mobile devices or smartphones. Digital payment is defined as a method of payment conducted through digital means, where both the payer and the payee utilize electronic methods to send and receive funds. Consequently, it is also called electronic payment (Bisma et al., 2020). Digital-based payments or digital payments have begun to dominate because they are considered more effortless and practical when making transactions (Houston, 2020; Tamara et al., 2021). Statista, a global data and business intelligence platform with an extensive collection of statistics, reports, and insights, states that total transaction value in the Digital Payments market is projected to reach US\$11.53tn in 2024 (Statista, 2024). Statista also projects the total transaction value in digital payment, an expected total of US\$16.59tn by 2028. That means there is rapid growth of digital payment globally, including in Indonesia. This growth is caused by increased reliance on technology in everyday life. Then, based on reports from Ali et al. (2020), the penetration rate for digital wallet users is considered to be the highest, namely in the Millennial generation at 23.8% when compared to Generation Z, which is 20.6% and Generation X, which is 12.8%. So, the Millennial generation has the highest potential for using digital payments. One form of digital wallet payment tool is QRIS.

Quick Response Code Indonesian Standard (QRIS) is a QR Code standard issued by Bank Indonesia in the digital payment process via server-based electronic money applications, electronic wallets, or mobile banking (Juan & Indrawati, 2023; Kurniawati et al., 2021; Radho & Lestari, 2022; Wibowo & Rimadiaz, 2022). Transactions via digital payments can be made by scanning a QR Code via the application, transferring funds to other parties, or what is usually called peer-to-peer (P2P) transactions where banking and non-banking institutions also support this form of transaction by providing various conveniences in transactions (Undale et al., 2021). In line with the research results of Permadi and Wilandari (2021) and Sholihah (2023), they found that the majority of QRIS users feel the benefits and ease of use and that digital payments using QRIS are felt to be more efficient. According to data from The System Association, public interest in using QRIS is increasing (Saputra et al., 2021). This is proven by QRIS transactions in 2021, increasing by 202.41%

and reaching 375 million from 124 million users in 2020 (Putri et al., 2023). Likewise, developments in the use of QRIS also occurred in West Nusa Tenggara Province, with the total number of users as of September 2022 reaching 181,152 users, an increase of 514.83% compared to December 2021. Meanwhile, the value of QRIS transactions in the third quarter of 2022 reached 514.83% and increased 346.575% from the previous year. This makes the transaction method using QR Code or QRIS (Quick Response Indonesian Standard) the third most popular platform in Indonesia in 2021 (Triutomo et al., 2022). This is proven by QRIS transactions in 2021, increasing by 202.41% and reaching 375 million from 124 million users in 2020 (Putri et al., 2023). Likewise, developments in the use of QRIS also occurred in Eastern Indonesia (West Nusa Tenggara Province), with the total number of users as of September 2022 reaching 181,152 users, an increase of 514.83% compared to December 2021. Meanwhile, the value of QRIS transactions in the third quarter of 2022 reached 514.83% and increased 346.575% from the previous year. This makes the transaction method using QR Code or QRIS (Quick Response Indonesian Standard) the third most popular platform in Indonesia in 2021 (Triutomo et al., 2022).

Several studies have found that perceptions that influence a person's attitude towards using QRIS include perceived benefits, perceived convenience, and perceived risk. This perception is significantly influenced by security, convenience, usability, social factors, and trust in QRIS (Nag & Gilitwala, 2019; Wijayanthi, 2019). This opinion is supported by research results (Husrizal Syah et al., 2022; Putri et al., 2023), which show that perceived convenience significantly positively affects attitudes toward using QRIS digital payments. This is further strengthened by the results of the research conducted by Liem (2022), which shows that security, perceived usefulness, ease of use, trust, subjective norms, and attitudes significantly affect intention to use QRIS digital payments. However, Triutomo et al. (2022) showed slightly different research results that subjective norms do not significantly affect the intention to use QRIS. Meanwhile, the results of research conducted by Silaen et al. (2021) show that perceived benefits and convenience do not significantly affect intention to use QRIS, while perceptions of risk and security have a significant effect on intention to use QRIS. Based on this, it is necessary to carry out further research regarding Generation M's perceptions of using QRIS as a digital payment tool due to inconsistencies in the results of previous research.

This study examines Millennials' perceptions of using QRIS as a digital payment service through the lens of the Theory of Planned Behavior (TPB), which includes attitudes, subjective norms, and perceived behavioral control (Ariffin et al., 2019; Ariffin & Lim, 2020;

Liao et al., 2007; Arta et al., 2020; Mahyuni & Setiawan, 2021). Notably, to the best of the authors' knowledge, research on the use of QRIS, especially among Millennials in Eastern Indonesia, remains scarce. This topic is particularly interesting due to the disparity in digital literacy and infrastructure between Eastern Indonesia and other regions (Caraka et al., 2023; Tanra & Tusholehah, 2022; Rohmah et al., 2023; Dhakal & Tjokro, 2021) contrasted with Generation Z's demand for more accessible, faster, and easier digital payment services.

Literature Review

Digital Payment and QRIS

The digitalization of the economy has impacted lifestyle patterns. Financial innovation has been encouraged by disruptive innovations, leading to changes in several financial products, services, production processes, and organizational structures (Frame et al., 2018). Among these changes is the revolution of digital payments through current technologies, ranging from mobile payments and ATM debits to e-money and barcode-based digital payments. Digital payment itself can be defined as a method of payment produced and conducted through digital means. In digital payments, both the payer and payee use digital methods to send and receive cash, thus also being referred to as electronic payment (Bisma et al., 2020). The existence of digital payments facilitates easier payment transactions. However, some individuals resist adopting these technologies due to behavioral intentions and resistance to innovation (Sivathanu, 2019). Kaur et al. (2020) identified that resistance to adopting mobile payments is often due to a lack of consumer experience, confidence, perceived security risks, and the comprehensive functionality of mobile payment systems. Additionally, Trianto et al. (2023) found that the majority of merchants in Indonesia and Malaysia prefer to conduct transactions using cash rather than digital payments.

The QR Code, as the most widely used two-dimensional barcode technology, is designed to be decoded quickly. This code is read by a QR scanner and can be found on mobile phones or smartphones. One significant application of QR Codes is in market transactions, specifically for QR code payments. These payments are contactless and involve the QR code being scanned from a mobile app to complete the transaction (Kosim & Legowo, 2021). Bank Indonesia has also developed an electronic payment service based on the Quick Response Code, known as the Quick Response Code Indonesian Standard (QRIS). The QRIS payment model offers numerous benefits for both consumers and merchants. According to Hamzah Muchtar et al. (2024), consumers using QRIS transactions benefit from faster service, enhanced security, and the convenience of cashless payments. For merchants, adopting QRIS

can boost business branding, increase sales, reduce cash handling costs, and help build a credit profile for future financing opportunities.

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) is widely used to understand individuals' intentions and behaviors, including digital technology practices (Wang et al., 2016; Triutomo et al., 2022; Hopalı et al., 2022; Jesslyn et al., 2023; Octavia et al., 2021; Sholihah, 2023; Undale et al., 2021). TPB, a classical social psychology theory, has been widely recognized and validated across numerous studies and various domains, sectors, and geographical regions, as demonstrated by Yuriev et al. (2020). TPB posits that individuals act rationally, with their behaviors resulting from thoughtful consideration and deliberate planning. According to TPB, an individual's behavioral intention is influenced by their attitude towards the behavior, subjective norms, and perceived behavioral control. TPB explains that a person's behavior is influenced by their perceptions. According to TPB, three components influence a person's intention to behave: attitude toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 2020; Bahtiar, 2021; Jesslyn et al., 2023; Nugroho et al., 2018).

In TPB, attitude refers to an individual's overall evaluation of a behavior. Wang et al. (2016) and Ru et al. (2018) defined attitude as an individual's positive or negative evaluation of engaging in a particular behavior. According to this theory, if an individual has a positive attitude towards a specific behavior, their intention to perform that behavior will be high. Therefore, in the context of digital payment behavior, if an individual believes that QRIS payment is relevant and helpful in making life easier and more flexible, they will likely maintain a positive attitude and form a strong intention to use digital payments. This argument aligns with several studies, including those by Halim et al. (2023), Johan et al. (2022), Zulhawati et al. (2022), Maslichah & Diana (2022), Nur & Panggabean (2021), Rahmayanti et al. (2021), Indrawan et al. (2021), Koob et al. (2021), Valencia & Layman (2021), Zafar et al. (2021), and Piarna et al. (2020), which show that attitude has a significant positive effect on the use of digital technology.

H₁: Attitude towards behavior significantly affects the intention to use QRIS.

In addition, an individual's perception of subjective norms can influence their intention to carry out certain behaviors. Subjective norms are determined by normative beliefs, which are the perceptions of specific influential individuals' (referents) opinions on whether one should or should not engage in a particular behavior. Fishbein and Ajzen (2011) proposed that

subjective norms consist of two components: subjective injunctive norm (SIN) and subjective descriptive norm (SDN). SIN refers to behaviors that are commonly approved or disapproved, similar to the traditional concept of subjective norm in TPB. SDN refers to behaviors exhibited by key referents in a given social environment (Wang et al., 2016). Individuals tend to comply with the expectations and behaviors of significant others. In other words, the higher the perceived SIN and SDN, the more likely individuals are to engage in the behavior (De Leeuw et al., 2015). This concept also applies to QRIS digital payment behavior. If individuals recognize that important referents (e.g., family members, close friends, celebrities) believe they should use QRIS in daily life, they will feel social pressure and be more likely to intend to use QRIS as their digital payment method. This is supported by studies conducted by Alalwan et al. (2017), Angelina & Aswin Rahadi (2020), Ansari et al. (2021), Asokan Vasudevan et al. (2023), Mubarak & Yuliani (2023), Kim et al. (2010), Persada et al. (2021), and Bakri et al. (2023).

H₂: Subjective norms have a significant effect on the intention to use QRIS.

The third determinant of behavioral intention is perceived behavioral control. Rana et al. (2019), Raza et al. (2020), and Ong et al. (2021) describe perceived behavioral control as an individual's perception of a particular task's difficulty based on the resources they have available. Additionally, Chavarria et al. (2017) define perceived behavioral control as the extent to which a consumer believes they can influence or manage a future behavior. Sulistiyani and Harwiki (2016) also explain perceived behavioral control as the degree to which an individual feels that the occurrence or non-occurrence of a behavior is within their control. Perceived behavioral control refers to an individual's belief about their ability to influence or manage a specific behavior based on available resources and personal control. Kim et al. (2013) added that control factors can be categorized into internal and external constraints: Internal control pertains to personal attributes such as knowledge and self-efficacy, including skills, abilities, willpower, and determination, while external control pertains to environmental influences. If individuals have greater control over themselves, they will have a stronger intention to perform a particular behavior (Ru et al., 2018). This concept also applies to the adoption of digital payment. When individuals feel confident and possess the necessary knowledge and skills to use QRIS digital payments in their daily lives, they are more likely to intend to use it. This concept is supported by several studies conducted by Zafar et al. (2021), Steele et al. (2021), Koo & Cuandra (2022), Johan et al.

(2022), Kınış & Tanova (2022), Hukama (2022), Darmawan & Wenerda (2022), and Abdul-Halim et al. (2022).

H₃: Perception of behavioral control has a significant effect on the intention to use QRIS.

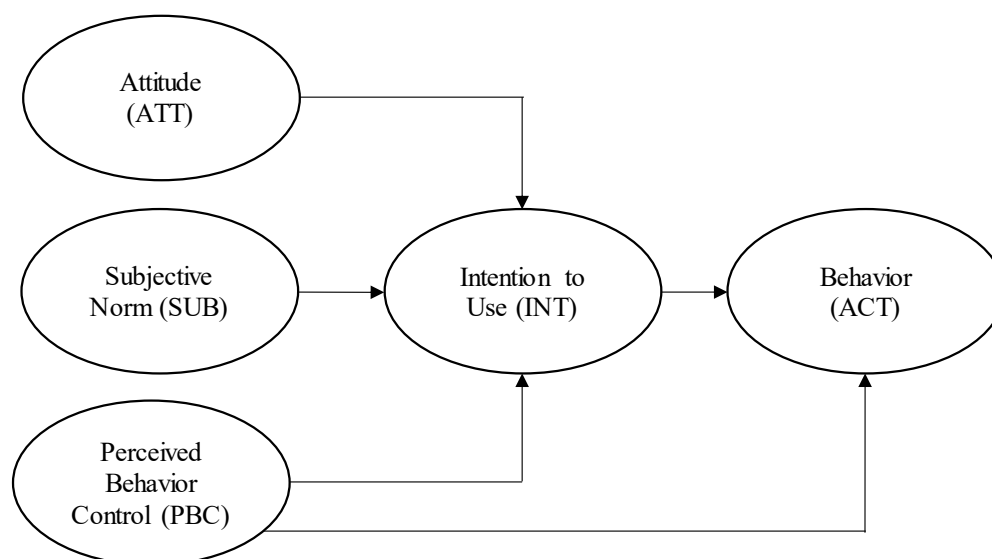
H₄: Perception of behavioral control has a significant effect on the behavior of using QRIS.

Some researchers have identified limitations within the TPB model. Specifically, while the model's independent variables often enhance behavioral intentions (an individual's perceived likelihood of performing a specific behavior), these intentions do not always lead to actual behavior (Wu et al., 2021). This suggests that the traditional TPB framework may not fully bridge the gap between intentions and actions (Khan et al., 2023; Qiu et al., 2017). However, this contradicts the findings by Al Mamun et al. (2018) and Trivedi et al. (2018), who discovered a significant effect of behavioral intention on actual behavior. Generally, the stronger the intention to undertake a behavior, the more likely it is that the behavior will be performed (Kim et al., 2013). Therefore, if users genuinely intend to use QRIS as a digital payment system, it is likely that this intention will lead to actual adoption and usage.

H₅: Behavioral intention has a significant effect on the actual use of QRIS.

Figure 1 in the document titled "Framework" presents a conceptual model that illustrates the relationships between various psychological and behavioral factors influencing the use of a particular behavior or technology. The framework is based on the Theory of Planned Behavior (TPB)

Figure 1. Framework



Methods

TPB was adopted in this study to predict the behavioral intention and actual behavior of Eastern Indonesian Millennials in using QRIS as a digital payment method. Eastern Indonesia, specifically West Nusa Tenggara Province, was chosen as the object of study due to its significant disparities in digital literacy and infrastructure compared to other regions, providing a unique context to understand the challenges and opportunities in digital payment adoption among Millennials. The focus on Millennials is crucial because they are the largest demographic group driving the adoption of new technologies, including digital payments. Millennials, born between 1980 and 2000 (Naumovska, 2017; Sugianto & Brahmana, 2018), represent a significant demographic in Indonesia. Based on survey data from the APJII (Association of Indonesian Internet Providers) at the end of 2018, Indonesia's total population reached 264.16 million and is expected to continue growing (Houston, 2020). The Central Statistics Agency of Indonesia (BPS) reports that the Millennial generation population in Indonesia has reached 69.9 million (Faramitha et al., 2021). According to Sugianto and Brahmana (2018), Millennials are a generation that grew up in an era deeply connected to the internet and technology, which has significantly influenced their routines and lifestyles. This generation is particularly adept at using technology, including smartphones, making them well-versed in digital-based payments (Husrizal Syah et al., 2022). Their behaviors and preferences are likely to shape the future of financial services, making them a critical group for understanding and fostering digital payment adoption.

The TPB framework is composed of attitude, subjective norms, and perceived behavioral control components (De Leeuw et al., 2015). Attitude was measured using Liébana-Cabanillas scales that consist of "I feel that QRIS makes it easier for me to carry out transactions (ATT1)," "I feel safe when scanning QRIS (ATT2)," "Transactions using QRIS are more secure because they are conducted via personal devices (ATT3)," "The security of QRIS is more guaranteed because there is PIN verification for every transaction (ATT4)," "The use of QR mobile payments is a good idea (ATT5)," "The use of QR mobile payments is beneficial (ATT6)," "The use of QR mobile payments is interesting (ATT7)," "I feel that QRIS is suitable for use (ATT8)," and "Using QRIS is more reliable for transactions (ATT9)," while the subjective norm variable measured using Taufique & Vaithianathan (2018) scales, "People who influence my behavior think that I should use QRIS (SUB1)," "People who are important to me would recommend using QRIS (SUB1)," "People who are important to me view the QRIS system as beneficial (SUB3)," "People who are important to

me think it is a good idea to use QRIS (SUB4)." Additionally, perceived behavioral control was assessed using Ajzen & Fishbein (2021) scales like "I feel that QRIS makes it easier for me to carry out transactions (PBC1)", "I feel safe when scanning QRIS (PBC2)", "QRIS guarantees transaction security and confidentiality of user data (PBC3)", "I also believe that transactions using QRIS are more secure because they are conducted via personal devices (PBC4)", and "the security of QRIS is more guaranteed because there is PIN verification for every transaction (PBC5)." Moreover, this study uses Chen & Tung (2014) scales to evaluate usage intention; three items were "I am likely to use QRIS (INT1)", "I will choose it for future transactions (INT2)", and "I am open to using QRIS in the near future (INT3)". Furthermore, behavioral constructs are measured using the adoption of Siki & Suki (2019) scales as follows: "I often use QRIS for my digital payments (ACT1)", "I often choose payment methods that are labeled as secure, like QRIS (ACT2)", "I often prefer payment options that are endorsed by reputable sources, such as QRIS (ACT3)", "I often select payment methods that are straightforward and easy to use, such as QRIS (ACT4)", "When considering a payment method, I look for QRIS as a trusted and certified option (ACT5)", "I often choose QRIS for transactions with merchants (ACT6)".

Table 1. Reliability and AVE of the outer model

Construct	Cronbach's Alpha	Composite Reliability	AVE
INT	0.824	0.895	0.740
SUB	0.774	0.855	0.596
ATT	0.871	0.899	0.526
PBC	0.893	0.922	0.703
ACT	0.889	0.916	0.644

Table 2. Discriminant Validity by HTMT

Construct	INT	SUB	ATT	PBC	ACT
INT					
SUB	1.006				
ATT	1.006	1.007			
PBC	0.961	0.943	0.947		
ACT	0.939	0.989	0.964	0.938	

Table 3. Factor Loadings and Cross Loadings

	INT	SUB	ATT	PBC	ACT
INT1	0.880	0.721	0.698	0.723	0.765
INT2	0.869	0.717	0.693	0.710	0.752
INT3	0.831	0.641	0.676	0.696	0.707
SUB1	0.692	0.824	0.712	0.676	0.711
SUB2	0.606	0.735	0.682	0.633	0.645
SUB3	0.630	0.796	0.633	0.598	0.637
SUB4	0.554	0.729	0.500	0.513	0.585
ATT1	0.502	0.473	0.709	0.541	0.541
ATT2	0.495	0.488	0.696	0.527	0.543
ATT3	0.567	0.580	0.750	0.602	0.609
ATT4	0.590	0.635	0.768	0.635	0.630
ATT5	0.597	0.638	0.765	0.640	0.631
ATT6	0.662	0.670	0.738	0.619	0.668
ATT7	0.610	0.621	0.718	0.697	0.654
ATT8	0.588	0.629	0.652	0.534	0.648
ATT9	0.502	0.473	0.709	0.541	0.689
PBC1	0.652	0.608	0.717	0.751	0.741
PBC2	0.717	0.705	0.727	0.870	0.693
PBC3	0.676	0.660	0.672	0.854	0.729
PBC4	0.703	0.673	0.692	0.860	0.689
PBC5	0.705	0.649	0.674	0.852	0.689
ACT1	0.687	0.662	0.699	0.758	0.808
ACT2	0.691	0.635	0.685	0.642	0.787
ACT3	0.640	0.644	0.641	0.647	0.784
ACT4	0.719	0.698	0.687	0.666	0.826
ACT5	0.730	0.719	0.728	0.721	0.837
ACT6	0.681	0.670	0.666	0.629	0.771

The population in this study comprises the Indonesian people, with the sample selected using non-probability sampling. A questionnaire was designed according to the stated hypotheses, targeting the Millennial generation aged 23-43 years, born between 1980 and 2000. who are active QRIS users in West Nusa Tenggara, Eastern Indonesia. After the questionnaire was designed, a pilot test involving 25 targeted respondents was conducted to ensure the reliability of the scales. The pilot test results indicated that the questionnaire had adequate reliability and clarity. Subsequently, the online questionnaire was created using Google Forms and distributed through social media platforms such as WhatsApp. Tan & Teo (2000) argues that online questionnaires offer several advantages: (1) they allow sampling from multiple geographical locations, (2) they are cost-effective, and (3) they facilitate faster responses. The survey was distributed from July to December 2023, yielding feedback from 615 respondents. However, some responses were excluded for not meeting the criteria, resulting in a final sample of 505 respondents who met the study's criteria. The sample size in this study satisfies the minimum requirements for partial least squares (PLS) analysis. According to Peng and Lai (2012), the "10 times" rule of thumb is used to determine the minimum sample size. Given that this study employs 27 formative indicators, the required minimum sample size is 270.

The data analysis for this study was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess the relationships between the constructs and to test the proposed hypotheses. PLS was chosen for this study due to its ability to analyze causal relationships between construct variables while simultaneously managing both model constructs and measurement items (Petter et al., 2007). Moreover, PLS is well-suited for data with non-normal distributions and does not require strict randomness, making it ideal for examining relationships in such datasets. Additionally, PLS is advantageous for analyzing complex predictive models (Hair et al., 2012). The evaluation of the outer model involved several tests, including item reliability, internal consistency, convergent validity, and discriminant validity for each construct. Item reliability was assessed through the loadings of individual questions, which reflect how well the construct is measured by those questions. A factor loading threshold of 0.6 was used to indicate acceptable individual reliability (Chin, 1998; Hair et al., 2012). On the other hand, internal consistency is evaluated using Cronbach's alpha and composite reliability, which measure the extent to which items within a construct are correlated, with values higher than the threshold of 0.7 indicating greater consistency (Nunnally, 1967; Hair et al., 2012). Table 1 shows that all the measurement items met these standards. Cronbach's Alpha values for all constructs exceed the 0.7 threshold,

demonstrating good internal consistency, meaning that the items within each construct are well-correlated and reliable. Composite reliability values, which are considered more accurate indicators of internal consistency than Cronbach's Alpha, also surpass the 0.7 threshold for all constructs, reinforcing their reliability.

Convergent validity was assessed by examining the factor loadings, composite reliability, and Average Variance Extracted (AVE) indicators for each construct. For a construct to be deemed to have strong convergent validity, its AVE must exceed 0.5 (Hulland, 1999; Fornell & Larcker, 1981). Table 1 also shows that all constructs in the study have AVE values above this benchmark, confirming their good convergent validity. Specifically, ATT has an AVE of 0.526, SUB has 0.596, PBC has 0.703, and INT has 0.740. and ACT has 0.644. On the other hand, discriminant validity detects the degree of distinction between tested variables and different constructs. This study evaluated discriminant validity using the heterotrait-monotrait ratio (HTMT) of correlations, with HTMT values lower than 0.90, indicating no serious validity issues (Henseler et al., 2015). As shown in Table 2, all HTMT values between constructs are below the 0.90 threshold, confirming discriminant validity. Additionally, Table 3 shows reasonable discriminant validity, as the factor loadings for each indicator are higher for their assigned constructs than for any other constructs (Sarstedt et al., 2021).

Result and Discussion

The demographic profiles in Table 4 show a higher representation of females, with 60.6% of the sample being female compared to 39.4% male. The age distribution indicates that the majority of respondents are between 23 and 27 years old, accounting for 71.5% of the sample. This is followed by the 28 to 32-year-old age group, which represents 13.9% of respondents. Smaller percentages are observed in the 33 to 37-year-old group at 7.1% and the 38 to 43-year-old group at 7.5%.

Table 4. Demographic Profiles

Division		Frequency	Percentages (%)
Gender	Male	199	39.4
	Female	306	60.6
Age	23 – 27 y.o.	361	71.5
	28 – 32 y.o.	70	13.9
	33 – 37 y.o.	38	7.1
	38 – 43 y.o.	36	7.5

Table 5. Inner Model Result

Hypothesis	Coefficient	t-Value	p-Value	Decision
H ₁ : ATT -> INT	0.057	3.424	0.001	Accepted
H ₂ : SUB -> INT	0.059	5.537	0.000	Accepted
H ₃ : PBC -> INT	0.058	6.959	0.000	Accepted
H ₄ : PBC -> ACT	0.044	9.494	0.000	Accepted
H ₅ : INT -> ACT	0.045	11.550	0.000	Accepted

The inner model results in Table 5 indicate the relationships between different constructs and their impact on intention (INT) and behavior (ACT). Hypothesis H₁, which posits that attitudes (ATT) influence intention (INT), is accepted with a coefficient of 0.057 and a t-value of 3.424, showing significance at $p = 0.001$. This indicates that more positive attitudes towards QRIS lead to a stronger intention to use it. Similarly, Hypothesis H₂, suggesting that subjective norms (SUB) affect intention (INT), is also accepted with a coefficient of 0.059, a t-value of 5.537, and significance at $p = 0.000$. This implies that the perceived social pressure to use QRIS positively influences the intention to adopt it. Hypothesis H₃, which examines the effect of perceived behavioral control (PBC) on intention (INT), is supported with a coefficient of 0.058, a t-value of 6.959, and significance at $p = 0.000$. Additionally, Hypothesis H₄, indicating that perceived behavioral control (PBC) influences actual behavior (ACT), is accepted with a coefficient of 0.044, a t-value of 9.494, and significance at $p = 0.000$. This implies that the higher the perceived behavioral control, the more likely individuals are to intend to use and engage in actual usage of QRIS. In other words, when individuals feel confident in their ability to use QRIS and perceive few obstacles to its use, they are more likely to actually use QRIS, the digital payment system. Lastly, Hypothesis H₅, which suggests that intention (INT) impacts actual behavior (ACT), is accepted with a coefficient of 0.045, a t-value of 11.550, and significance at $p = 0.000$. This means that the higher the intention to use QRIS, the more likely it is to translate into actual usage behavior among Millennials.

This study reveals several important findings. Millennials in Eastern Indonesia, particularly in West Nusa Tenggara, exhibit high levels of confidence and trust in using QRIS for digital payments, feeling assured about the security of their data. Trust is a pivotal element in the adoption of technology, influencing user behavior indirectly. This is consistent with the research by To and Trinh (2021), which found that when users trust mobile wallets, they view them as more beneficial, thus increasing their intention to use them. Similarly,

Sleiman et al. (2021) highlight that trust is essential for the adoption of mobile payment systems, as it reduces perceived risks and enhances users' confidence in utilizing these services. Furthermore, Millennials are motivated to use QRIS due to its user-friendly nature and alignment with their lifestyle. They find QRIS easy to use and navigate, providing an enjoyable experience that fits seamlessly into their daily activities. This preference for user-friendly technology that offers pleasure and convenience reflects the findings of previous studies by To and Trinh (2021) and Ha et al. (2019). Moreover, frequent QRIS usage indicates its efficiency and the happiness it brings, which encourages continued adoption. Because QRIS is easy to use, Millennials view it as efficient, motivating them to continue using it. The simplicity of QRIS reduces the effort required for transactions, an important factor for Millennials who value efficiency and convenience in their fast-paced lives (Ha et al., 2019). Finally, Millennials' willingness to use QRIS stems from their intrinsic desires, which are unaffected by external influences. These findings align with several studies conducted by Angelina & Aswin Rahadi (2020), Anshari et al. (2021), Asokan Vasudevan et al. (2023), Bakri et al. (2023), Mubarak & Yuliani (2023), Persada et al. (2021), Arwin et al. (2022), Bahtiar (2021), Hidayat et al. (2020), and Onibala et al. (2021).

The findings of this study highlight a significant paradox in the context of Eastern Indonesia's digital payment adoption, particularly given the region's well-documented challenges with digital infrastructure and literacy compared to other regions of the country (Caraka et al., 2023; Tanra & Tusholehah, 2022; Rohmah et al., 2023; Dhakal & Tjokro, 2021). Despite these infrastructural and educational disparities, Millennials in West Nusa Tenggara exhibit high confidence and trust in QRIS for digital payments. This suggests that while the underlying infrastructure may be lacking, the perceived benefits and user-friendly nature of QRIS are powerful enough to overcome these barriers. It also implies that the low penetration of QRIS in the region is mostly due to external factors rather than individual behavioral tendencies.

Interestingly, Millennials are not merely passive recipients of technology but active participants who can navigate and utilize digital tools effectively (Piarna et al., 2020), even in less-than-ideal conditions. Their high levels of confidence and trust in QRIS indicate a strong inclination towards digital solutions that meet their needs for convenience and efficiency, reflecting a bottom-up approach to technology adoption. This resilience also points to a potential shift in how digital literacy and infrastructure challenges can be addressed; rather than solely focusing on top-down infrastructural improvements, there is an opportunity to enhance user experiences and leverage the natural adaptability of younger generations.

Conclusion and Suggestion

In conclusion, this study reveals that despite the challenges posed by inadequate digital infrastructure and lower levels of digital literacy in Eastern Indonesia, Millennials in West Nusa Tenggara exhibit high levels of confidence and trust in using QRIS for digital payments. The inner model results demonstrate that attitudes, subjective norms, and perceived behavioral control significantly influence intention, which in turn impacts actual behavior. These findings underscore the importance of trust in technology adoption, as it indirectly influences user behavior by enhancing the perceived benefits and security of QRIS. The user-friendly nature and alignment of QRIS with Millennials' lifestyles further motivate its usage, highlighting the critical role of ease of use and efficiency in driving digital payment adoption. The study also points out that Millennials' willingness to use QRIS stems from intrinsic motivations unaffected by external pressures, which aligns with multiple previous studies. This paradoxical situation suggests that while external infrastructural and educational barriers exist, the perceived advantages of QRIS are sufficiently compelling to drive its adoption among Millennials in the region. Therefore, addressing these external factors could further enhance the penetration and effectiveness of QRIS in Eastern Indonesia.

Although this study's findings are significant in supporting the proposed hypotheses, there are several limitations to note. First, the research relies solely on the Theory of Planned Behavior (TPB) as its theoretical framework. Future studies could enhance their analysis by incorporating additional theories, such as the Technology Acceptance Model (TAM), to provide a more comprehensive understanding. Second, TPB primarily focuses on rational and cognitive aspects of behavior and does not account for emotional factors, which can also significantly influence actions. To address this, future research could incorporate methods such as Multiple Decision Theory, which takes emotional factors into greater consideration. Lastly, this study was conducted only in one province of Eastern Indonesia. Expanding future research to include multiple provinces across Indonesia would provide a more extensive and representative understanding of the factors influencing QRIS adoption.

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