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Applying the Unified Theory of Acceptance and Use of Technology (UTAUT) to Analyze Use Behavior of the Quick Response Code Indonesian Standard (QRIS) Among Generation Z in Bandung

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Abstract

This study aims to analyze the factors influencing the use behavior of Generation Z in using the Quick Response Code Indonesian Standard (QRIS) in Bandung by applying the Unified Theory of Acceptance and Use of Technology (UTAUT) model. A quantitative approach with descriptive and associative research design was employed, using primary data collected through an online questionnaire distributed to 120 Generation Z respondents who actively use QRIS. The research variables consisted of performance expectancy, effort expectancy, social influence, and facilitating conditions as independent variables, and use behavior as the dependent variable. Data were analyzed using multiple linear regression with the support of SPSS, accompanied by validity, reliability, and classical assumption tests. The results indicate that all independent variables simultaneously have a significant effect on use behavior. Partially, performance expectancy, effort expectancy, social influence, and facilitating conditions each show a positive and significant influence on QRIS use behavior, with social influence identified as the most dominant factor. This study concludes that the UTAUT model effectively explains QRIS use behavior among Generation Z in Bandung, where perceived usefulness, ease of use, social influence, and supporting facilities play a crucial role in encouraging sustainable QRIS usage.

INTRODUCTION

The rapid development of digital technology has significantly transformed payment systems worldwide, shifting transactions from cash-based methods to non-cash and digital payments that are considered more efficient, secure, and cost-effective (Permatasari & Sari, 2024). This transformation is closely linked to the expansion of the digital economy and the increasing role of financial technology (fintech) in facilitating daily economic activities. In Indonesia, the adoption of electronic money and digital wallets such as OVO, GoPay, and DANA reflects this shift toward a cashless society. To further standardize and integrate digital payment systems, Bank Indonesia, in collaboration with the Indonesian Payment System Association (ASPI), introduced the Quick Response Code Indonesian Standard (QRIS) in 2019 as a national QR code payment standard (Faizani & Indriyanti, 2021; Digibank, 2024).

QRIS was designed to simplify digital transactions between merchants and consumers while strengthening the national payment system under the National Payment Gateway (Gerbang Pembayaran Nasional/GPN). Its implementation also aims to reduce dependency on foreign payment networks and foreign currencies, particularly the US dollar, in domestic digital transactions (Saleh & Marzaman, 2025). Empirical data indicate a substantial increase in both transaction volume and nominal value of QRIS from 2020 to 2024, highlighting its growing role in Indonesia's digital payment ecosystem. However, despite the rapid growth of QRIS usage,

differences remain in how individuals consistently adopt and utilize this technology in their daily transactions, indicating a behavioral gap that warrants further investigation.

To explain technology adoption and usage behavior, various theoretical models have been developed, including the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). TAM, introduced by Davis (1989), emphasizes perceived usefulness and perceived ease of use as key determinants of technology acceptance (Sebastián et al., 2022). Although TAM has been widely applied, it is often criticized for its limited explanatory power in capturing complex social and contextual factors influencing technology use. The UTAUT model, developed by Venkatesh et al. (2003), integrates eight major theories of technology adoption, including TRA, TPB, TAM, IDT, SCT, MPCU, MM, and C-TAM-TPB, and is considered a more comprehensive framework. UTAUT proposes four core constructs performance expectancy, effort expectancy, social influence, and facilitating conditions as primary determinants of technology use behavior. Prior empirical studies have applied UTAUT to examine QRIS adoption and digital payment behavior in various contexts. Auliya and Aransyah (2023) found that performance expectancy and effort expectancy significantly influence QRIS usage intention, while Pamungkas and Rahmayanti (2024) reported a positive relationship between performance expectancy and actual use behavior.

Other studies highlight the role of social influence and facilitating conditions in shaping digital payment behavior. Andre et al. (2019) and Syakinah (2024) demonstrated that social pressure and recommendations from peers and family can enhance QRIS adoption, particularly among younger users. Similarly, Anugrah and Ompusunggu (2021) and Wibowo (2023) confirmed that facilitating conditions, such as smartphone availability and stable internet access, positively affect digital payment usage. Nevertheless, some studies reported inconsistent findings; for example, Azzahroo and Estiningrum (2021) found that social influence did not significantly affect QRIS use behavior, indicating mixed empirical evidence. Although previous studies have extensively examined QRIS adoption using UTAUT and its extensions, several gaps remain. First, many studies focus on behavioral intention rather than actual use behavior, even though intention does not always translate into consistent usage. Second, empirical findings regarding the influence of UTAUT constructs particularly social influence remain inconclusive. Third, limited research specifically examines Generation Z as the primary unit of analysis, despite this generation being the most technologically adaptive and dominant user group in digital payment ecosystems.

Generation Z in Table1 defined as individuals born between 1996 and 2010, grew up in a digitally connected environment with widespread internet access and mobile technology (Subowo, 2021). Their characteristics such as a preference for speed, convenience, and efficiency make them highly relevant to studies on QRIS usage. However, despite their high digital literacy and intensive consumption behavior (Nurmalia et al., 2024), Generation Z does not always use QRIS consistently across transactions. This phenomenon suggests a gap between technological capability and actual use behavior that has not been sufficiently addressed in prior research.

Tabel 1. Generational Classification

Generation	X	Y (Millennial)	Z
Year of Birth	1961 - 1980	1981 - 1995	1996 – 2010
Characteristics	Independent, raised and nurtured under the guidance of parents from the Baby Boomer generation, who are hardworking and efficient.	Optimistic, idealistic, and individualistic, having grown up during the early expansion of the digital era.	Born during a period of rapid technological advancement, inclined toward instant solutions, less ambitious, and highly adaptable to technology.

Source: Hardion Wijoyo, et al (2020), Processed Data

Addressing these gaps, this study aims to examine the factors influencing the use behavior of Generation Z in using QRIS in Bandung by applying the Unified Theory of Acceptance and Use of Technology (UTAUT) model. The research seeks to answer the following questions: How do performance expectancy, effort expectancy, social influence, and facilitating conditions affect the use behavior of QRIS among Generation Z? Accordingly, the objectives of this study are to analyze both the partial and simultaneous effects of these four UTAUT constructs on QRIS use behavior. The novelty of this research lies in its emphasis on actual use behavior rather than behavioral intention, its specific focus on Generation Z, and its empirical contribution within the context of QRIS implementation at the city level. The findings are expected to provide theoretical enrichment for technology adoption literature and practical insights for policymakers and digital payment service providers in enhancing sustainable QRIS usage.

Accordingly, this study explicitly addresses an unresolved research gap in the digital payment literature by shifting the analytical focus from behavioral intention to actual use behavior, while, re-examining the explanatory consistency of UTAUT construct particularly social influence within a Generation Z context. By Situating this analysis in the QRIS implementation at the city level, the study offers a focused empirical contribution that extends prior UTAUT based research beyond intention centric and demographically aggregated analysis.

Literature Review and Hypothesis Development

Digital Payment Adoption and Technology Acceptance

The rapid advancement of digital technology has transformed payment systems from cash-based transactions toward more efficient, secure, and integrated digital payment mechanisms. In Indonesia, the implementation of the Quick Response Code Indonesian Standard (QRIS) represents a strategic initiative to standardize digital payments and strengthen the national digital financial ecosystem. Despite the increasing adoption of QRIS, variations in actual user behavior indicate that technology adoption is influenced not only by system availability but also by behavioral and contextual factors.

To explain technology adoption behavior, prior studies have employed theoretical models such as the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). While TAM emphasizes perceived usefulness and perceived ease of use, it has been criticized for limited explanatory power in complex social and technological environments. UTAUT integrates multiple acceptance theories and identifies performance expectancy, effort expectancy, social influence, and facilitating conditions as the primary determinants of technology use behavior.

Empirical research on digital payment adoption generally confirms the relevance of these constructs. However, inconsistencies remain, particularly regarding the role of social influence and the tendency of prior studies to focus more on behavioral intention rather than actual use behavior. Furthermore, limited empirical attention has been given to Generation Z, despite their dominant role in digital payment ecosystems. Addressing these gaps, this study focuses on QRIS use behavior among Generation Z, thereby providing context-specific empirical evidence for the emerging literature on digital payment adoption.

Performance Expectancy and Use Behavior

Performance expectancy refers to the degree to which individuals believe that using a technology enhances their task performance. In digital payment contexts, perceived benefits such as transaction speed, convenience, efficiency, and reduced operational costs can motivate sustained usage behavior. Previous empirical studies consistently demonstrate a positive association between performance expectancy and technology adoption behavior. When Generation Z users perceive QRIS as beneficial and performance-enhancing, they are more likely to use it continuously.

H1: Performance expectancy positively and significantly influences QRIS use behavior among Generation Z.

Effort Expectancy and Use Behavior

Effort expectancy refers to the perceived ease of using technology. Technologies that are simple to understand, easy to operate, and require minimal cognitive or operational effort tend to achieve higher adoption rates. Within the QRIS ecosystem, usability factors such as seamless QR scanning, intuitive mobile interfaces, and rapid transaction processing can strengthen user engagement. Empirical findings in digital payment and mobile technology adoption literature indicate that effort expectancy significantly influences actual technology usage.

H2: Effort expectancy positively and significantly influences QRIS use behavior among Generation Z.

Social Influence and Use Behavior

Social influence reflects the extent to which individuals perceive that important others believe they should use a particular technology. Among Generation Z, peer recommendations, social trends, and digital community norms play a crucial role in shaping behavioral decisions. Although several studies report a significant positive relationship between social influence and digital payment adoption, others find insignificant or context-dependent effects. These mixed findings highlight the need for further empirical testing focusing on actual use behavior within specific demographic contexts.

H3: Social influence positively and significantly influences QRIS use behavior among Generation Z.

Facilitating Conditions and Use Behavior

Facilitating conditions refer to the availability of technical infrastructure, resources, and institutional support that enable the use of technology. In QRIS implementation, stable internet connectivity, smartphone accessibility, application compatibility, and merchant acceptance constitute critical enabling factors. Prior research indicates that facilitating conditions significantly affect actual technology usage, particularly in environments where infrastructure readiness determines behavioral feasibility.

H4: Facilitating conditions positively and significantly influence QRIS use behavior among Generation Z.

Conceptual Framework

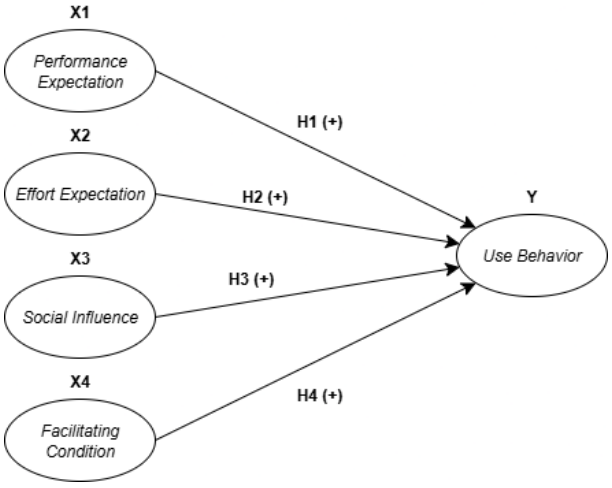
Integrated Conceptual Model

Grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT), this study proposes that performance expectancy, effort expectancy, social influence, and facilitating conditions function as direct determinants of QRIS use behavior among Generation Z users.

By emphasizing actual usage behavior rather than behavioral intention, the proposed framework extends prior research on digital payment adoption and provides empirically testable relationships in an emerging economy context. The model positions behavioral use as the outcome of cognitive, social, and infrastructural determinants operating simultaneously within the digital financial ecosystem.

Figure Caption

Figure 1. Conceptual Framework of QRIS Use Behavior Based on UTAUT.



Source: Processed by author

The model proposes that performance expectancy, effort expectancy, social influence, and facilitating conditions directly influence QRIS use behavior among Generation Z users in Bandung.

METHODS

Research Design

This study adopted a quantitative research approach employing a descriptive-associative design to examine the relationships between technology acceptance factors and actual QRIS use behavior among Generation Z users. A quantitative design was selected to enable objective measurement of behavioral constructs and statistical testing of hypothesized relationships derived from the Unified Theory of Acceptance and Use of Technology (UTAUT).

Population and Sample

The target population comprised Generation Z individuals residing in Bandung, Indonesia, who had prior experience using the Indonesian Standard Quick Response Code (QRIS). A purposive sampling technique was applied to ensure that respondents had the relevant experience required for a valid behavioral assessment. Based on these criteria, a total of 120 valid responses were obtained and included in the analysis.

Data Collection and Measurement

Primary data were collected through a structured online questionnaire distributed using Google Forms. All constructs were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Measurement indicators for performance expectancy, effort expectancy, social influence, facilitating conditions, and use behavior were adapted from validated UTAUT-based instruments in prior technology acceptance and digital payment studies to ensure content validity and conceptual consistency.

Data Analysis Procedure

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). The analytical procedure consisted of several stages:

1. Descriptive statistical analysis to summaries respondent characteristics and variable distributions.
2. Instrument testing, including validity (Pearson Product-Moment correlation) and reliability (Cronbach's Alpha) assessments.
3. Classical assumption testing, comprising normality (Kolmogorov-Smirnov), multicollinearity (Tolerance and VIF), and heteroscedasticity (Glejser test).
4. Hypothesis testing using multiple linear regression analysis to evaluate the influence of UTAUT constructs on QRIS use behavior.

This analytical sequence ensured that statistical assumptions were satisfied prior to regression estimation, thereby supporting the robustness and credibility of the empirical findings.

RESULTS

Instrument Validity and Reliability

The validity test results presented in Table 2 show that all measurement items exhibit Pearson Product-Moment correlation coefficients ranging from 0.657 to 0.841, with significance values below 0.01. These coefficients exceed the critical -table threshold for a sample of 120

respondents, indicating that all indicators satisfy the required validity criteria and are appropriate for further statistical analysis.

Reliability analysis yields a Cronbach's Alpha of 0.846, which exceeds the recommended minimum of 0.70, confirming that the measurement instrument demonstrates satisfactory internal consistency.

Table 2. Validity Test

No.	Variable		R Product Moment	Sig 2 tailed
1.	**Performance Expectancy**	1.	0,789	0,000
		2.	0,746	0,000
		3.	0,805	0,000
2.	**Effort Expectation**	1.	0,774	0,000
		2.	0,841	0,000
		3.	0,819	0,000
3.	**Social Influence**	1.	0,736	0,000
		2.	0,799	0,000
		3.	0,657	0,000
4.	**Facilitating Condition**	1.	0,694	0,000
		2.	0,779	0,000
		3.	0,782	0,000
5.	**Use Behavior**	1.	0,703	0,000
		2.	0.719	0,000
		3.	0,724	0,000

Source: Processed Data

Classical Assumption Tests

Normality

As shown in Table 3, the Kolmogorov-Smirnov test applied to the unstandardized regression residuals yields an Asymp. Sig. (2-tailed) value of 0.200, which is greater than 0.05. This result indicates that the residuals are normally distributed and that the normality assumption required for regression analysis is satisfied.

Table 3. Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		120
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	6.72794366
Most Extreme Differences	Absolute	.055
	Positive	.055
	Negative	-.046
Test Statistic		.055
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Source: SPSS Processed

Multicollinearity

The multicollinearity diagnostics reported in Table 4 indicate tolerance values ranging from 0.625 to 0.816 and VIF values between 1.226 and 1.600 across all independent variables. Since tolerance values exceed 0.10 and VIF values remain below 10, no multicollinearity is detected in the regression model.

Table 4. Multicollinearity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	6.063	6.998		.866	.388		
	PERFORMANCE EXPECTANCY	.227	.076	.241	2.975	.004	.625	1.600
	EFFORT EXPECTATION	.227	.071	.247	3.183	.002	.682	1.466
	SOCIAL INFLUENCE	.252	.069	.258	3.630	.000	.816	1.226
	FACILITATING CONDITION	.232	.068	.264	3.405	.001	.688	1.455

a. Dependent Variable: USE BEHAVIOR

Source: SPSS Processed

Heteroscedasticity

The Glejser test results displayed in Table 5 show that the significance values for Performance Expectancy (0.426), Effort Expectancy (0.696), Social Influence (0.454), and Facilitating Conditions (0.546) are all greater than 0.05. These findings indicate that the regression model does not exhibit heteroscedasticity and satisfies the classical regression assumptions.

Table 5. Heteroscedasticity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	10.181	3.982		2.557	.012
	PERFORMANCE EXPECTANCY	-.035	.043	-.093	-.799	.426
	EFFORT EXPECTATION	-.016	.041	-.044	-.392	.696
	SOCIAL INFLUENCE	-.030	.040	-.077	-.751	.454
	FACILITATING CONDITION	.023	.039	.067	.605	.546

a. Dependent Variable: ABS_RES

Source: SPSS Processed

Model Feasibility and Hypothesis Testing

Overall Model Significance

The ANOVA results presented in Table 6 reveal an F-statistic of 31.959 and a significance value of 0.000, indicating that the independent variables jointly explain variation in Use behavior and confirming the overall statistical feasibility of the regression model.

Table 6. ANOVA Test or F-Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5987.883	4	1496.971	31.959	.000[b]
	Residual	5386.562	115	46.840		
	Total	11374.444	119			

a. Dependent Variable: USE BEHAVIOR

b. Predictors: (Constant), FACILITATING CONDITION, EFFORT EXPECTATION, SOCIAL INFLUENCE, PERFORMANCE EXPECTANCY

Source: SPSS Processed

Multiple Linear Regression Results

The coefficient estimates reported in Table 7 produce the following regression equation:

$$\mathbf{Y = 6.063 + 0.227X_1 + 0.227X_2 + 0.252X_3 + 0.232X_4}$$

All independent variables demonstrate positive and statistically significant relationships with Use behavior, including:

a. Performance Expectancy ($p = 0.004$)
b. Effort Expectancy ($p = 0.002$)
c. Social Influence ($p < 0.001$)
d. Facilitating Conditions ($p = 0.001$)

These results confirm that H1, H2, H3, and H4 are supported, as all predictors significantly influence the dependent variable.

Table 7. Multiple Linear Regression Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	6.063	6.998		.866	.388
	PERFORMANCE EXPECTANCY	.227	.076	.241	2.975	.004
	EFFORT EXPECTATION	.227	.071	.247	3.183	.002
	SOCIAL INFLUENCE	.252	.069	.258	3.630	.000
	FACILITATING CONDITION	.232	.068	.264	3.405	.001

a. Dependent Variable: USE BEHAVIOR

Source: SPSS Processed

DISCUSSION

Performance Expectancy and Use Behavior

The significant positive influence of performance expectancy confirms that perceived functional benefits remain the primary driver of digital payment adoption among Generation Z. This finding aligns closely with the Unified Theory of Acceptance and Use of Technology (UTAUT), which emphasizes performance-related utility as the most consistent predictor of actual technology use across contexts.

Recent high-impact studies in digital finance and mobile payment ecosystems (2023-2025) similarly report that transaction efficiency, perceived usefulness, and operational convenience are decisive determinants of sustained digital payment behavior, particularly in emerging economies where digital infrastructure adoption is still evolving. In the Indonesian QRIS context, this suggests that even digitally native users prioritize practical performance value over purely social or symbolic motivations.

Effort Expectancy and Use Behavior

Effort expectancy also demonstrates a significant positive effect, indicating that perceived ease of use and cognitive simplicity play a critical role in shaping routine QRIS utilization. This result reinforces contemporary extensions of technology acceptance theory, which argue that usability remains a central determinant even in mature digital environments.

Recent empirical evidence from fintech adoption research shows that interface simplicity, seamless interaction, and reduced transaction friction significantly enhance continued usage behavior rather than merely initial adoption. For Generation Z users— who exhibit high digital exposure but low tolerance for complexity-ease of use becomes a decisive behavioral stabilizer rather than a secondary factor.

Social Influence and Use Behavior

The significant effect of social influence highlights the continuing relevance of peer norms, digital communities, and networked behavioral diffusion in shaping payment behavior among younger populations. Contemporary Ql literature increasingly frames digital payment adoption as a socially embedded practice, in which behavioral conformity and perceived legitimacy within peer ecosystems reinforce sustained use.

Recent studies further indicate that in highly connected generational cohorts. social endorsement operates not only through direct interpersonal influence but also via platform visibility, community narratives. and digital lifestyle alignment. The present findings therefore support the evolving view that technology adoption among Generation Z is simultaneously utilitarian and socially constructed.

Facilitating Conditions and Use Behavior

Facilitating conditions exhibit a significant positive relationship with use behavior, underscoring the structural importance of infrastructure readiness, institutional support, and ecosystem accessibility in translating behavioral intention into actual usage. This aligns with recent fintech and digital inclusion research, which emphasizes that technology availability alone is insufficient without reliable connectivity, merchant integration, and regulatory support.

Evidence from emerging-market studies published in leading journals (2023-2025) consistently demonstrates that infrastructural maturity and ecosystem interoperability are decisive factors in sustaining long-term digital payment engagement. Within the QRIS system, widespread merchant acceptance and stable mobile connectivity appear to function as behavior-enabling conditions, rather than merely contextual background factors.

Integrated Interpretation and Research Contribution

Taken together, the findings demonstrate that cognitive performance and effort expectancy), social (social influence), and structural (facilitating conditions) dimensions jointly shape actual QRIS use behavior. By empirically focusing on use behavior rather than behavioral intention, this study advances contemporary UTAUT-based research, which increasingly calls for outcome-oriented validation in real-world digital ecosystems.

From a theoretical perspective, the results reinforce UTAUT's continued explanatory power in emerging digital finance contexts and support recent scholarly arguments that technology adoption should be understood as a multidimensional interaction among utility, usability, social embeddedness, and infrastructural enablement.

From a practical standpoint, the findings imply that policymakers and digital payment providers should prioritize:

a. functional efficiency and transaction value,
b. interface simplicity and user experience,
c. social diffusion strategies within youth communities, and
d. broad ecosystem infrastructure readiness.

Such integrated efforts are essential for achieving sustained digital financial inclusion rather than short-term adoption spikes.

CONCLUSION

This study examined the determinants of QRIS use behavior among Generation Z within the framework of the Unified Theory of Acceptance and Use of Technology (UTAUT). The empirical findings demonstrate that performance expectancy, effort expectancy, social influence, and facilitating conditions each positively and statistically significantly influence actual digital payment usage. These results confirm that sustained QRIS utilization is shaped by the combined interaction of cognitive utility, usability, social embeddedness, and infrastructural readiness, rather than by a single behavioral determinant.

From a theoretical perspective, this research strengthens UTAUT's continued relevance in emerging digital finance ecosystems, while extending prior intention-based studies by providing empirical validation at the behavior level. By situating the analysis within the Generation Z demographic and the Indonesian QRIS system, the study contributes context-specific evidence that enriches the geographical and generational scope of technology acceptance scholarship.

From a practical and policy standpoint, the findings suggest that achieving sustainable digital financial inclusion requires simultaneous optimization of functional transaction value, user-centred interface simplicity, socially embedded diffusion mechanisms, and reliable infrastructural support. Digital payment strategies that prioritize technological deployment over usability, social engagement, and ecosystem readiness may fail to drive long-term behavioral adoption.

Overall, this study highlights that sustainable digital payment behavior emerges from an integrated socio-technical ecosystem, offering actionable insight for financial regulators, payment providers, and policymakers seeking to strengthen inclusive digital finance in emerging economies.

Limitations and Future Research

This study is subject to several limitations that should be acknowledged.

First, the empirical analysis is restricted to Generation Z respondents in Bandung, which may limit the generalizability of the findings to other demographic groups or geographic regions. Differences in digital literacy, infrastructure availability, and socio-economic context across regions may lead to variations in QRIS adoption behavior.

Second, the study relies on self-reported survey data, which may be influenced by response bias or perceptual subjectivity. Although validated measurement instruments were employed, behavioral responses may not fully capture actual transactional behavior in real-world settings.

Third, the analytical framework focuses on the core UTAUT constructs without incorporating additional contextual variables such as trust, perceived risk, financial literacy, or regulatory awareness, which have been increasingly highlighted in recent digital finance literature. Future research is therefore encouraged to extend this work by:

1. Examining broader demographic and regional samples across Indonesia or cross-country contexts;
2. Integrating objective behavioral or transactional data to complement perceptual measures; and
3. Incorporating expanded theoretical variables related to trust, security, financial inclusion, and digital ecosystem governance.

Such extensions would provide a more comprehensive understanding of sustainable digital payment adoption within emerging financial systems.

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