

The Effect of Factors in the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) Model on QRIS Usage among Generation Z in Kalianda

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Abstract

Purpose: This study examines how the seven core constructs of the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), namely performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit influence behavioral intention and use behavior toward the Quick Response Code Indonesian Standard (QRIS). It also investigates whether gender, age, and experience moderate these relationships among Generation Z users in Kalianda, South Lampung.

Design/methodology/approach: A quantitative survey was conducted among 270 Generation Z QRIS users in Kalianda, selected through purposive sampling and reached via an online Likert-scale questionnaire. The data were processed with Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 3.0, covering outer model evaluation (convergent and discriminant validity, reliability) and inner model evaluation (coefficient of determination, path coefficients, and interaction-based moderation testing).

Findings: Facilitating conditions, price value, and habit significantly influence behavioral intention, whereas performance expectancy, effort expectancy, social influence, and hedonic motivation do not. Habit and behavioral intention significantly drive use behavior, while facilitating conditions has no direct effect on use behavior. Gender, age, and experience each moderate selected paths, most consistently those involving facilitating conditions.

Practical implications: Payment regulators, banks, and merchants seeking to expand QRIS adoption among younger users are likely to gain more from strengthening habitual, everyday use and ensuring reliable supporting infrastructure than from performance- or enjoyment-oriented promotional messaging alone.

Originality/value: The study extends UTAUT2 to a semi-urban Indonesian setting that has received limited empirical attention, and it tests three demographic moderators simultaneously within a single QRIS adoption model, offering a more contextualized account of Generation Z payment behavior outside major metropolitan areas.

Paper type: Empirical

Keywords: QRIS, UTAUT2, Behavioral Intention, Use Behavior, Generation Z.

1. Introduction

Indonesia's payment system has moved steadily toward digital transactions over the past decade, a shift that accelerated once the COVID-19 pandemic pushed households and merchants to look for contactless alternatives to cash. Bank Indonesia has supported this transition since 2014 through the National Non-Cash Movement, and later through the mandatory rollout of server-based electronic money on toll roads in 2017, gradually normalizing card-based and electronic payment instruments alongside conventional cash and cheques (Inggiharti, 2020).

Digital wallets have experienced rapid growth in Indonesia, supported by the country's widespread smartphone adoption. According to the Indonesian Internet Service Providers Association, internet users reached approximately 221.6 million out of a total population of 278.7 million in 2023, representing an internet penetration rate of about 79.5%, with continued growth expected (Asosiasi Penyelenggara Jasa Internet Indonesia [APJII], 2024). In addition, a considerable proportion of the population still has limited access to formal banking services. Bain & Company, Google, and Temasek (2019) estimated that 51% of Indonesians remain underserved by the banking sector. As a result, e-wallets have become

an accessible gateway to digital financial services, particularly for individuals who are not fully integrated into the formal banking system.

Table 1. Electronic Money Transaction Value in Indonesia, 2021–2025

Year	Transaction Value (IDR)
2021	38.7 trillion
2022	177 trillion
2023	366.3 trillion
January–June 2024	303 trillion
January–November 2025	3.02 quadrillion

Source(s): GoodStats (2024, 2025)

As shown in Table 1, the value of electronic money transactions increased from approximately IDR 38.7 trillion in 2021 to IDR 366.3 trillion in 2023. By November 2025, it had reached approximately IDR 3.02 quadrillion, indicating consistent and sustained growth in the adoption of cashless payment methods rather than a temporary increase.

Much of this growth has been driven by the proliferation of e-wallet-compatible QR codes, but the early years of QR-based payment created a new inconvenience: merchants had to display a separate code for every provider they accepted. To resolve this fragmentation, Bank Indonesia introduced the Quick Response Code Indonesian Standard (QRIS) through Board of Governors Regulation No. 21/18/PADG/2019, unifying the various digital payment methods into a single national QR standard intended to make transactions cheaper, faster, and centrally supervised (Bank Indonesia, 2019).

Adoption of this standard has been particularly strong among younger users. According to Himawan Kusprianto, Director of Bank Indonesia's Payment System Policy Department, Generation Z accounts for the largest share of cashless payment users, with more than 75 million users (Tempo, 2025). Generation Z, commonly known as Gen Z, iGen, or the centennial generation, includes individuals born between 1996 and 2010. This generation is widely recognized for its familiarity with digital technology and its high level of comfort in using digital tools (Purnomo et al., 2020).

Understanding why a particular group adopts a payment technology requires a theoretical lens that explains technology acceptance behavior rather than merely describing usage statistics. This study applies the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), developed by Venkatesh, Thong, and Xu (2012). The model extends the original UTAUT framework introduced by Venkatesh et al. (2003) by incorporating three additional consumer-oriented constructs, namely hedonic motivation, price value, and habit. These constructs complement the four original predictors: performance expectancy, effort expectancy, social influence, and facilitating conditions.

Prior applications of UTAUT2 to digital payment adoption have produced inconsistent results across contexts. Alalwan et al. (2018) found that internet banking intention among Jordanian customers was shaped by performance expectancy, effort expectancy, hedonic motivation, price value, and perceived risk, while social influence had no measurable effect. Working across Lebanese and British mobile banking users, Merhi et al. (2019) added trust, perceived security, and perceived privacy to the model and found that behavioral intention was driven by habit, perceived privacy, perceived security, and trust, with performance expectancy mattering in Lebanon but not in the United Kingdom, and price value showing the reverse pattern. In an Indonesian digital-wallet setting, Indrawati et al. (2023) reported that continuance intention toward DigiCash was explained, in descending order of importance, by social influence, price saving orientation, perceived risk, hedonic motivation, habit, and performance expectancy.

These mixed findings suggest that the relative importance of UTAUT2 predictors is not fixed but varies according to the technology, the population, and the context being studied. Previous research on QRIS

adoption has focused primarily on large cities and university populations. As a result, limited evidence is available regarding how Generation Z in smaller regional areas, such as Kalianda, South Lampung, evaluates these factors. This study addresses this gap by examining the complete UTAUT2 model while also incorporating gender, age, and experience as moderating variables in the context of QRIS use among Generation Z in Kalianda. The findings are expected to provide insights for policymakers and payment service providers by identifying which factors influencing QRIS adoption remain consistent across different settings and which are shaped by local conditions.

2. Literature Review and Hypotheses Development

Consumer behavior is generally understood as the set of actions a person undertakes while searching for information, comparing alternatives, and deciding whether to purchase or use a product or service, extending through to post-adoption use and evaluation (Irwansyah et al., 2021; Aswar, 2025). Technology acceptance research applies this lens specifically to the decision to adopt and continue using an information system, and QRIS, as a payment technology, fits naturally within this frame.

QRIS was developed through collaboration between the payment industry and Bank Indonesia to make QR-based transactions faster, easier, more affordable, secure, and reliable. In Indonesia, these objectives are summarized by the acronym CEMUMUAH. QRIS serves as the national QR code standard for server-based electronic money, digital wallets, and mobile banking applications. Since 1 January 2020, all non-cash payment service providers in Indonesia have been required to support QRIS. This policy aims to improve transaction efficiency, expand financial inclusion, encourage the growth of micro, small, and medium enterprises (MSMEs), and strengthen cross-border QR payment interoperability through the QRIS Antarnegara initiative with Thailand, Malaysia, the Philippines, Vietnam, and other partner countries in Asia.

Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)

Venkatesh et al. (2003) originally proposed UTAUT by synthesizing eight earlier technology-acceptance theories, including the Technology Acceptance Model, the Theory of Reasoned Action, the Motivational Model, the Theory of Planned Behavior, the combined TAM-TPB model, the Model of PC Utilization, Diffusion of Innovation theory, and Social Cognitive Theory, arriving at four core predictors: performance expectancy, effort expectancy, social influence, and facilitating conditions. Because the original model was built around workplace technology adoption, Venkatesh, Thong, and Xu (2012) extended the framework to better reflect consumer technology adoption. The resulting UTAUT2 model introduced three additional constructs, namely hedonic motivation, price value, and habit, while retaining age, gender, and experience as moderating variables.

Performance expectancy refers to the degree to which using a new technology is believed to improve job or task performance (Venkatesh et al., 2021, as cited in Zhang et al., 2021). Effort expectancy captures the perceived ease associated with using that technology (Zhang et al., 2021). Social influence reflects the extent to which a person feels that important others, including family, friends, and peers, encourage the use of a new system (Permana & Parasari, 2019). Facilitating conditions describe an individual's belief that the organizational and technical infrastructure required to support system use is available (Lee et al., 2019). Hedonic motivation denotes the enjoyment or pleasure derived from using a technology (Sitar-Tăut, 2021). Price value refers to the cognitive evaluation of the trade-off between the perceived benefits of an application and its monetary cost (Shaw & Sergueeva, 2019). Habit represents the learned tendency to perform a behavior automatically as a result of repeated prior experience (Shaw & Sergueeva, 2019). Behavioral intention is defined as the strength of a person's intention to perform a specific behavior, such as using an information system (Monica & Japariato, 2022). Use behavior refers to the actual use of a technology by consumers as reflected in their observable usage behavior (Zhang et al., 2021).

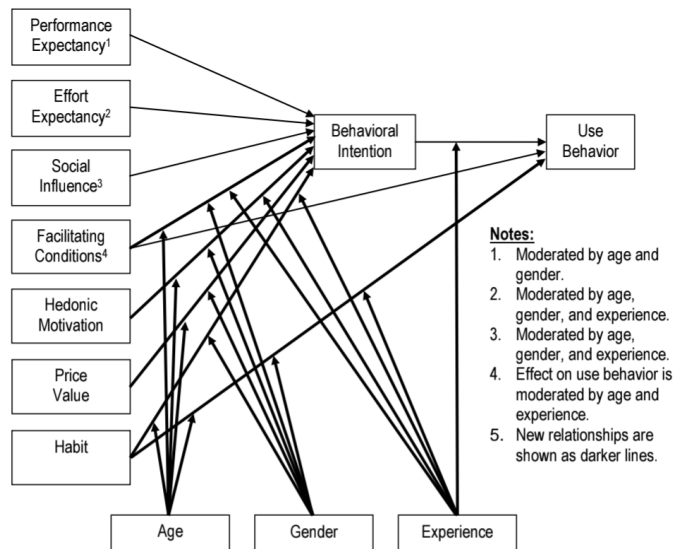


Figure 1. Conceptual Research Framework

Source(s): Venkatesh et al. (2012)

Hypothesis development in this study follows the ten structural paths depicted in Figure 1, together with a composite moderation hypothesis covering gender, age, and experience. In hypothesis testing research, each relationship is grounded in supporting theory, prior empirical findings, and logical reasoning before being stated formally (Sijal, 2024).

Performance expectancy is consistently framed in the technology acceptance literature as a leading driver of intention, yet its effect has not always replicated outside workplace settings; several UTAUT2 studies on financial technology have found it non-significant once habit and facilitating conditions are accounted for (Widodo et al., 2019; Alalwan et al., 2018).

H1: Performance expectancy has a significant effect on behavioral intention to use QRIS.

Effort expectancy is expected to matter most when a technology is unfamiliar or complex; for a generation that has grown up with smartphone interfaces, the marginal ease-of-use benefit of one more scan-and-pay application may be less decisive (Indrawati et al., 2023; Desvira & Aransyah, 2023).

H2: Effort expectancy has a significant effect on behavioral intention to use QRIS.

Social influence captures pressure or encouragement from one's reference group; its relevance tends to fade once a technology becomes normalized in daily life, so its effect on intention is treated here as an open empirical question rather than a foregone conclusion (Rahardhan & Legowo, 2024; Noormansyah & Maulidha, 2025).

H3: Social influence has a significant effect on behavioral intention to use QRIS.

Facilitating conditions are theorized to affect both the intention to adopt a technology and its actual, continued use, since the availability of devices, network access, and support materials can shape a user's confidence at multiple stages of the adoption process (Baabdullah et al., 2019; Kamajaya & Mimba, 2024).

H4: Facilitating conditions have a significant effect on behavioral intention to use QRIS.

H5: Facilitating conditions have a significant effect on use behavior of QRIS.

Hedonic motivation, or the enjoyment derived from use, has been found to matter for entertainment- or social-media-oriented technologies but appears less central for a strictly transactional tool such as a payment system (Pasaribu et al., 2025; Widodo et al., 2019).

H6: Hedonic motivation has a significant effect on behavioral intention to use QRIS.

Price value is expected to play a particularly important role when users evaluate whether the benefits of adopting a technology outweigh the associated monetary, time, and effort costs. Since QRIS does not impose direct transaction fees on consumers, this evaluation of benefits relative to costs may become especially important in influencing adoption decisions (Khan et al., 2021; Barata & Coelho, 2021)..

H7: Price value has a significant effect on behavioral intention to use QRIS.

Habit, as a learned and largely automatic response, has repeatedly emerged as one of the strongest predictors in UTAUT2-based payment studies, often exceeding the explanatory power of the four original UTAUT constructs combined (Hakim et al., 2024; Saragih & Rikumahu, 2022).

H8: Habit has a significant effect on behavioral intention to use QRIS.

H9: Habit has a significant effect on use behavior of QRIS.

Finally, behavioral intention is expected to translate into actual use, consistent with the general technology-acceptance premise that intention is the proximal antecedent of behavior (Ferghyna & Herlambang, 2020).

H10: Behavioral intention has a significant effect on use behavior of QRIS.

Beyond these direct relationships, UTAUT2 proposes that demographic characteristics influence the strength of each predictor. Gender has been found to moderate the effects of facilitating conditions and social influence (Senshaw & Twinomurizi, 2021). Age has been associated with differences in the importance of performance expectancy, effort expectancy, and hedonic motivation among younger and older users (Malik & Mushquash, 2025). Experience generally reduces the influence of effort-related considerations while increasing the effect of habit on technology use (Utami & Panjaitan, 2026). These findings provide the basis for formulating a composite moderation hypothesis:

H11: Gender, age, and experience moderate the relationships among the research variables in the QRIS adoption model.

3. Research Method

This study uses a quantitative approach implemented through a survey design, chosen for its cost efficiency and its suitability for reaching a geographically dispersed respondent pool within a limited timeframe (Nashrullah et al., 2023). The research was conducted in Kalianda, South Lampung Regency, a location selected for its relevance to the researcher's own domicile and its status as a semi-urban center where QRIS adoption patterns have not previously been documented in the academic literature.

The research model consists of seven independent constructs: performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), hedonic motivation (HM), price value (PV), and habit (H). The model also includes one intervening construct, behavioral intention (BI), one dependent construct, use behavior (UB), and three moderating variables: gender, age, and

experience (Sugiyono, 2023; Hasan & Mildawati, 2020). Each construct was operationalized using three indicator items adapted from Venkatesh et al. (2003, 2012) and related UTAUT2 studies. Responses were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The population consists of all Generation Z QRIS users residing in Kalianda. Because no sampling frame of this population exists, a purposive sampling technique was used, restricting eligibility to respondents born between 1996 and 2010 who had used QRIS as a payment method for at least one to three months. Following the rule of thumb for PLS-SEM sample size proposed by Hair et al., which recommends a sample size of five to ten times the number of indicators (Saputro & Jalari, 2023), this study required a minimum of 270 respondents. The calculation was based on the 27 indicator items used across all constructs ($n = 27 \times 10 = 270$). Data were collected through a self-administered online questionnaire distributed using Google Forms. A total of 270 valid responses were obtained and retained for analysis, meeting the required minimum sample size.

Both primary and secondary data were used. Primary data came directly from the questionnaire responses, while secondary data were drawn from Bank Indonesia publications, industry reports, and other documentary sources used to contextualize the background of the study (Sulung & Muspawi, 2024).

All data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 3.0. This variance-based approach is appropriate for models involving multiple latent constructs and moderating relationships. The outer (measurement) model was evaluated by assessing convergent validity through outer loadings, with values above 0.70 considered preferable and values above 0.50 regarded as acceptable (Hair et al., 2022). Discriminant validity was assessed using cross-loadings, while reliability was evaluated using Cronbach's alpha and composite reliability, with recommended minimum values of 0.60 and 0.70, respectively (Ghozali, 2018; Sholihin & Ratmono, 2020). The inner (structural) model was assessed using the coefficient of determination (R^2), where values of 0.75, 0.50, and 0.25 indicate substantial, moderate, and weak explanatory power, respectively (Hair et al., 2017). Hypothesis testing was conducted using the bootstrapping procedure with a two-tailed significance level of 5%. A structural path was considered statistically significant when the t-statistic exceeded 1.96 and the p-value was below 0.05 (Ghozali, 2018). Moderating effects were examined using the interaction, or product-term, approach in SmartPLS by testing the statistical significance of each interaction term between the moderator and the predictor variables.

4. Result and Discussion

QRIS was developed by Bank Indonesia together with the Indonesian Payment System Association starting in 2018 and officially launched on 17 August 2019 to make QR-based transactions more efficient, secure, and inclusive across service providers. Before its introduction, every payment provider issued its own QR code, forcing merchants to display multiple codes side by side; QRIS consolidated these into a single, interoperable standard. Its uptake accelerated during the COVID-19 pandemic as a contactless payment option, and by 2025 Bank Indonesia reported around 57 million users and more than 39.3 million merchants, most of them micro, small, and medium enterprises, with transaction value reaching approximately IDR 579 trillion in the first half of the year. QRIS also supports cross-border interoperability with Thailand and Malaysia, among other partners, reinforcing its role in Indonesia's broader digital payment transformation.

4.1 Respondent Profile

Eligible respondents were Generation Z individuals residing in Kalianda who had used QRIS for at least one to three months. Table 2 summarizes their demographic composition.

Table 2. Respondent Characteristics (n = 270)

Characteristic	Category	Frequency	Percentage
Gender	Male	100	37%
	Female	170	63%
Age	< 16 years	13	5%
	17–23 years	136	50%
	24–30 years	121	45%
Experience	1–3 months	23	9%
	4–6 months	37	14%
	7–12 months	36	13%
	> 1 year	174	64%

Source(s): Authors' own creation

The sample skews female (63%) and is concentrated in the 17–23 age bracket (50%), broadly consistent with the age distribution one would expect for a Generation Z cohort. Most respondents (64%) had used QRIS for more than a year, suggesting the sample reflects experienced rather than first-time users—a point that becomes relevant later when interpreting the strength of the habit construct.

4.2 Descriptive Statistics of Research Variables

Each construct was measured through three statements and evaluated using an achievement-score approach, in which the total score obtained is expressed as a percentage of the maximum possible score and classified into five categories (0–20% strongly disagree, 21–40% disagree, 41–60% neutral, 61–80% agree, 81–100% strongly agree). Table 3 summarizes the results across all nine constructs.

Table 3. Descriptive Statistics of Research Variables

Variable	Mean Score	Percentage	Category
Performance Expectancy (PE)	1,095	81%	Strongly Agree
Effort Expectancy (EE)	1,073	79%	Agree
Social Influence (SI)	988	73%	Agree
Facilitating Conditions (FC)	1,096	81%	Strongly Agree
Hedonic Motivation (HM)	1,065	79%	Agree
Price Value (PV)	1,083	80%	Agree
Habit (H)	1,029	76%	Agree
Behavioral Intention (BI)	1,068	79%	Agree
Use Behavior (UB)	1,064	79%	Agree

Source(s): Authors' own creation

Respondents rated every construct at least at the “agree” level, with facilitating conditions and performance expectancy reaching “strongly agree.” In other words, Generation Z respondents in Kalianda hold broadly favorable perceptions across the entire UTAUT2 battery—yet, as the structural

results below show, favorable perception does not automatically translate into statistical influence on intention or use.

4.3 Measurement (Outer) Model

Convergent validity was evaluated using outer loadings and the Average Variance Extracted (AVE) for each construct. All indicator loadings exceeded the minimum acceptable threshold of 0.50, with most indicators showing loadings above 0.85. In addition, all constructs achieved AVE values greater than 0.50, ranging from 0.555 for use behavior to 0.851 for performance expectancy. These results indicate that the constructs meet the recommended criteria for convergent validity (Hair et al., 2022). Discriminant validity was assessed using cross-loadings. The results showed that each indicator had a higher loading on its corresponding construct than on any other construct, demonstrating that all nine constructs are empirically distinct from one another (Sholihin & Ratmono, 2020)..

Table 4. Convergent Validity and Reliability Results

Construct	AVE	Cronbach's Alpha	Composite Reliability
Performance Expectancy (PE)	0.851	0.912	0.945
Effort Expectancy (EE)	0.774	0.855	0.911
Social Influence (SI)	0.751	0.834	0.901
Facilitating Conditions (FC)	0.792	0.868	0.919
Hedonic Motivation (HM)	0.825	0.894	0.934
Price Value (PV)	0.829	0.896	0.936
Habit (H)	0.784	0.862	0.916
Behavioral Intention (BI)	0.790	0.866	0.918
Use Behavior (UB)	0.555	0.650	0.784

Source(s): SmartPLS 3.0 output

Reliability was assessed through Cronbach's alpha and composite reliability. As Table 4 shows, all nine constructs exceed the 0.60 alpha threshold and the 0.70 composite reliability threshold recommended by Ghazali (2018) and Sholihin and Ratmono (2020), including use behavior, whose alpha of 0.650 is comparatively modest but still within the acceptable range. Overall, the measurement model provides adequate support for proceeding to structural model estimation.

4.4 Structural (Inner) Model

Figure 2 presents the bootstrapped structural model output from SmartPLS, showing path coefficients and indicator loadings for the full model.

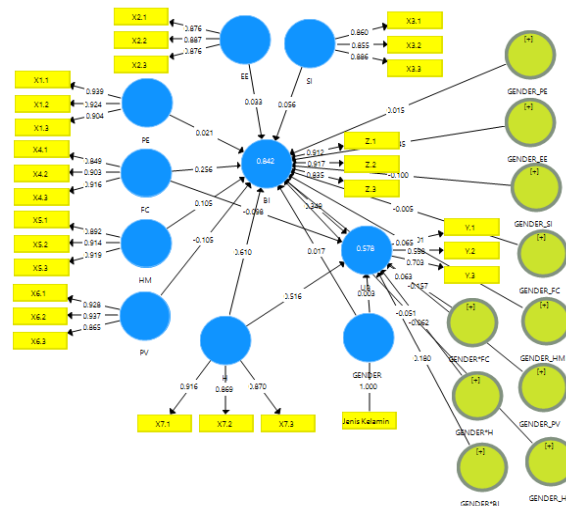


Figure 2. Structural Model Bootstrapping Output (SmartPLS 3.0)

Source(s): SmartPLS 3.0 output

The coefficient of determination (R^2) shows how well the independent variables explain the variation in each endogenous construct. As presented in Table 5, behavioral intention achieved an R^2 value of 0.842, indicating that 84.2% of the variation in behavioral intention can be explained by the seven exogenous constructs included in the model. According to the criteria proposed by Hair et al. (2017), this represents a substantial level of explanatory power. Meanwhile, use behavior obtained an R^2 value of 0.578, indicating that 57.8% of its variation is explained by facilitating conditions, habit, and behavioral intention. Based on the same criteria, this level of explanatory power is classified as moderate.

Table 5. Coefficient of Determination (R^2)

Endogenous Variable	R^2	Category
Behavioral Intention (BI)	0.842	Strong
Use Behavior (UB)	0.578	Moderate

Source(s): SmartPLS 3.0 output

4.5 Hypothesis Testing

Table 6 reports the results of the ten direct structural paths tested through bootstrapping, evaluated against the 5% significance criterion (t -statistic > 1.96 , p -value < 0.05).

Table 6. Direct Effects Hypothesis Testing Results

Hyp.	Path	Coefficient	t-statistic	p-value	Result
H1	PE $\rightarrow$ BI	-0.035	0.556	0.579	Rejected
H2	EE $\rightarrow$ BI	0.082	1.729	0.085	Rejected
H3	SI $\rightarrow$ BI	0.045	0.967	0.334	Rejected
H4	FC $\rightarrow$ BI	0.267	4.173	0.000	Accepted
H5	FC $\rightarrow$ UB	-0.076	0.872	0.384	Rejected
H6	HM $\rightarrow$ BI	0.144	1.671	0.095	Rejected

Hyp.	Path	Coefficient	t-statistic	p-value	Result
H7	PV → BI	-0.156	2.583	0.010	Accepted
H8	H → BI	0.619	8.866	0.000	Accepted
H9	H → UB	0.524	4.726	0.000	Accepted
H10	BI → UB	0.312	2.799	0.005	Accepted

Source(s): SmartPLS 3.0 output

Five of the ten hypothesized paths are supported. Facilitating conditions, price value, and habit each significantly affect behavioral intention; habit and behavioral intention each significantly affect use behavior; and facilitating conditions alone does not carry through to a direct effect on use behavior. Performance expectancy, effort expectancy, social influence, and hedonic motivation are not statistically significant predictors of behavioral intention in this sample.

4.6 Moderation Testing

Moderation was tested separately for gender, age, and experience using the interaction (product-term) approach in SmartPLS. Because each moderator interacts with multiple predictors, only the paths that reached significance ($p < 0.05$) are reported in Table 7; the complete set of interaction terms tested is available from the authors on request.

Table 7. Significant Moderation Effects

Moderator	Interaction Path	Coefficient	t-statistic	p-value
Gender	Gender × FC → UB	-0.157	2.047	0.041
Gender	Gender × SI → BI	-0.100	1.991	0.047
Age	Age × FC → UB	0.147	2.102	0.036
Age	Age × FC → BI	-0.237	3.534	0.000
Age	Age × HM → BI	0.215	2.711	0.007
Age	Age × PE → BI	-0.156	2.243	0.025
Experience	Experience × FC → UB	0.191	2.347	0.019
Experience	Experience × HM → BI	0.175	2.392	0.017
Experience	Experience × PE → BI	-0.194	2.034	0.042
Experience	Experience × SI → BI	0.115	2.500	0.013

Source(s): SmartPLS 3.0 output

Gender was found to moderate two relationships, namely the effect of facilitating conditions on use behavior and the effect of social influence on behavioral intention. These findings are consistent with Senshaw and Twinomurinzi (2021), who also reported that gender significantly moderates these two relationships in the context of digital government adoption. Age moderated four relationships. The strongest moderating effect was observed in the relationship between facilitating conditions and use behavior. Age also altered the relationship between facilitating conditions and behavioral intention and influenced the effects of hedonic motivation and performance expectancy on behavioral intention. These findings are in line with Malik and Mushquash (2025), who identified age as an important moderator across several UTAUT2 relationships. Experience also moderated four relationships involving facilitating conditions, hedonic motivation, performance expectancy, and social influence.

This result is consistent with the findings of Utami and Panjaitan (2026), which highlight experience as an important factor influencing the strength of several UTAUT2 relationships.

Overall, these findings provide partial support for H11. Compared with gender, age and experience moderate a wider range of relationships within the model. In addition, facilitating conditions emerged as the construct most consistently influenced by all three demographic moderators..

4.7 Discussion

Overall, the pattern of results points to a fairly specific story about how Generation Z in Kalianda decides to adopt and keep using QRIS: cognitive appraisals of performance and effort carry little weight, social pressure matters less than expected, but habit, facilitating conditions, and price value do the work of shaping both intention and behavior.

Performance expectancy showed no significant effect on behavioral intention ($\beta = -0.035$, $t = 0.556$, $p = 0.579$), rejecting H1. This mirrors findings by Widodo et al. (2019), Alalwan et al. (2018), and Putri et al. (2025), and suggests that Generation Z respondents do not treat perceived performance gains as their central reason for intending to use QRIS. A plausible explanation is that QRIS has already become a default, near-universal payment option in daily commerce; when a technology is this pervasive, users may adopt it simply because it is the available option rather than because they have consciously weighed its performance benefits.

Effort expectancy was likewise non-significant ($\beta = 0.082$, $t = 1.729$, $p = 0.085$), rejecting H2, in line with Indrawati et al. (2023), Desvira and Aransyah (2023), and Pasaribu et al. (2025). Having grown up immersed in smartphone-based interfaces, Generation Z users appear to regard QRIS as inherently easy to use, so ease of use does not function as a differentiating factor in shaping their intention—it is simply assumed.

Social influence also failed to reach significance ($\beta = 0.045$, $t = 0.967$, $p = 0.334$), rejecting H3, consistent with Rahardhan and Legowo (2024), Widodo et al. (2019), and Noormansyah and Maulidha (2025). Respondents appear to base their intention on personal considerations rather than on encouragement from family, friends, or peers, which is broadly consistent with QRIS's status as an already-normalized payment method rather than a novel technology requiring social validation.

Facilitating conditions, by contrast, significantly predicted behavioral intention ($\beta = 0.267$, $t = 4.173$, $p = 0.000$), supporting H4 and echoing Baabdullah et al. (2019), Anandia and Aisyah (2023), and Kamajaya and Mimba (2024). Most respondents perceived that the technical resources required to use QRIS, such as compatible devices, internet access, and adequate information, were readily available. This perception of readiness was associated with a stronger intention to use QRIS. However, facilitating conditions did not have a significant direct effect on use behavior ($\beta = -0.076$, $t = 0.872$, $p = 0.384$), leading to the rejection of H5. This finding differs from the results reported by Harimanto et al. (2025) and Anandia and Aisyah (2023), who found that facilitating conditions directly influence technology use. The results of the present study indicate that the role of facilitating conditions is more likely to influence actual QRIS usage indirectly by strengthening users' behavioral intention rather than directly affecting their behavior.

Hedonic motivation was not a significant predictor of behavioral intention ($\beta = 0.144$, $t = 1.671$, $p = 0.095$), rejecting H6, consistent with Pasaribu et al. (2025) and Widodo et al. (2019). This is broadly intuitive: QRIS is a functional payment mechanism rather than an entertainment product, so the

enjoyment users derive from an application appears to be secondary to more practical considerations in shaping their intention to use it.

Price value was found to have a significant effect on behavioral intention ($\beta = -0.156$, $t = 2.583$, $p = 0.010$), providing support for H7. This result is consistent with the findings of Khan et al. (2021) and Barata and Coelho (2021), who also reported that price value significantly influences behavioral intention. However, unlike those studies, the relationship observed in this study was negative rather than positive. One possible explanation is that respondents who already use QRIS regularly may become more sensitive to cost-related considerations. Factors such as awareness of merchant service fees or the reduction of promotional cashback programs may influence users' perceptions of the economic value of QRIS, leading to a slight decrease in their intention to continue using the system. Although respondents generally viewed the price value of QRIS positively, these findings suggest that certain cost-related perceptions may still reduce behavioral intention. Future studies could examine this relationship in greater detail by distinguishing perceived monetary benefits from perceived monetary risks..

Habit emerged as the strongest predictor in the model for both behavioral intention ($\beta = 0.619$, $t = 8.866$, $p = 0.000$) and use behavior ($\beta = 0.524$, $t = 4.726$, $p = 0.000$), supporting both H8 and H9 and aligning with Hakim et al. (2024), Putri et al. (2025), Saragih and Rikumahu (2022), Tam et al. (2020), and Lee et al. (2019). Given that 64% of respondents had used QRIS for more than a year, this result is unsurprising: once QR-based payment becomes an ingrained part of a person's daily routine, the decision to use it stops being a deliberate choice weighed against alternatives and instead becomes close to automatic.

Behavioral intention significantly predicted use behavior ($\beta = 0.312$, $t = 2.799$, $p = 0.005$), supporting H10 and matching Ferghyna and Herlambang's (2020) finding on BNI Mobile Banking users. This confirms the standard technology-acceptance premise that intention functions as the proximal driver of actual behavior, even in a model where habit already accounts for a large share of variance in use.

The moderation analysis presented in Section 4.6 provides additional insight into the relationships in the model. The results show that gender, age, and experience do not influence all relationships equally. Instead, each moderating variable affects only specific paths. Among all constructs, facilitating conditions was the most consistently moderated, indicating that the influence of technical support and available resources differs across demographic groups. This finding suggests that the effect of facilitating conditions on behavioral intention and use behavior varies according to users' gender, age, and level of experience. Although facilitating conditions significantly influence behavioral intention in the overall sample, the strength of this relationship is not the same for every group.

5. Conclusion

This study examined how the UTAUT2 constructs influence behavioral intention and use behavior toward QRIS among 270 Generation Z respondents in Kalianda, South Lampung. Most respondents were female (63%) and aged between 17 and 23 years (50%). Of the ten direct relationships tested, five were statistically significant. Facilitating conditions, price value, and habit significantly influenced behavioral intention, while habit and behavioral intention significantly influenced use behavior. In contrast, performance expectancy, effort expectancy, social influence, and hedonic motivation did not significantly affect behavioral intention. Facilitating conditions also did not have a significant direct effect on use behavior after accounting for its indirect influence through behavioral intention. In addition, gender, age, and experience moderated several of the proposed relationships, with facilitating conditions emerging as the construct most consistently affected by these demographic variables. These findings provide partial support for the proposed moderation hypothesis.

Taken together, the findings indicate that QRIS adoption among Generation Z in a semi-urban area such as Kalianda is influenced less by expectations of improved performance or ease of use and more by the availability of supporting infrastructure, perceptions of value relative to cost, and, most importantly, the development of habitual usage. From a practical perspective, once users have formed a routine of using QRIS, further adoption is likely to depend more on maintaining reliable infrastructure and reducing barriers to use than on emphasizing performance-related benefits through promotional efforts.

Several limitations should be considered when interpreting these findings and identifying opportunities for future research. First, the sample was obtained from a single regional area using purposive sampling, which may limit the generalizability of the results to other regions or age groups beyond Generation Z. Second, the significant negative relationship observed for price value deserves further investigation. Future studies should consider refining the measurement of this construct by distinguishing perceived monetary benefits from perceived monetary risks. Future research could also incorporate additional variables such as trust, perceived security, and perceived risk, which have been identified as important determinants in previous UTAUT2 studies (Merhi et al., 2019). A longitudinal research design would also provide valuable insights into whether the influence of habit becomes stronger or weaker as QRIS continues to develop as a widely adopted payment method.

For policymakers, Bank Indonesia and payment system operators would likely benefit from continuing to expand QRIS education and outreach in areas where usage still lags, alongside further investment in digital infrastructure and merchant partnerships. For payment providers, banks, and merchants, broadening QRIS acceptance across business types, strengthening network reliability, and providing clear usage guidance are likely to matter more than performance-oriented promotion. For Generation Z users themselves, continued use of QRIS as a cashless payment method offers convenience, speed, security, and efficiency, and sustained use is itself likely to reinforce the habitual patterns that this study finds to be central to continued adoption.

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