

THE INFLUENCE OF UTAUT2 DETERMINANTS ON BEHAVIORAL INTENTION AND USE BEHAVIOR IN QRIS ADOPTION AMONG CINEMA CONSUMERS IN BATAM CITY

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ABSTRACT

This study analyzes the determinants of actual use behavior of the Quick Response Code Indonesian Standard (QRIS) in cinema ticket payments within Batam City. Employing a modified Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) framework, it examines the effects of perceived risk, habit, hedonic motivation, and perceived value on use behavior, both directly and indirectly through behavioral intention. A quantitative causal research design was applied, using data obtained from 204 respondents through online questionnaires. Multiple linear regression analysis was employed to test the relationships among variables. The findings reveal that behavioral intention has a strong and significant influence on use behavior. Among the predictors, habit shows both direct and indirect positive effects on use behavior, while perceived risk, hedonic motivation, and perceived value affect use behavior only indirectly through behavioral intention. These results suggest that users' behavioral intentions serve as the main driver of QRIS adoption, emphasizing the importance of psychological readiness in promoting digital payment systems.

Keywords: Behavioral Intention; Digital Payment; Habit; QRIS; Use Behavior

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1. INTRODUCTION

Rapid digitalization has transformed how consumers perform everyday activities, particularly financial transactions. The increasing penetration of internet and mobile technologies has facilitated the development of digital platforms that offer greater convenience, efficiency, and accessibility (Febriani et al., 2023; Tri Ayu Astari et al., 2024). In Indonesia, this transformation is particularly evident given the country's substantial digital-user base. As of January 2024, Indonesia had approximately 278,7 million inhabitants, 353,3 million cellular connections, and 185,3 million internet users, representing approximately 66.5% of the population (Kemp, 2024). These developments provide a favorable environment for the continued expansion of digital financial services.

One of the most prominent developments in Indonesia's digital payment ecosystem is the Quick Response Code Indonesian Standard (QRIS) (Economic and Monetary Policy Department, 2024; Rahayu et al., 2024). Introduced as a standardized QR-based payment mechanism, QRIS enables interoperability across payment service providers and facilitates faster, more practical, and efficient transactions (Gunawan et al., 2023; Paramita & Cahyadi, 2024). Its increasing adoption has contributed to the broader transition from cash-based transactions toward a cashless society (Lonardi & Legowo, 2021). For consumers, QRIS offers convenient access to digital payments, while for businesses it can improve transaction efficiency, processing speed, and transparency (Ciptowati & Setiawan, 2024; Paramita & Cahyadi, 2024).

Despite these benefits, the availability of QRIS does not necessarily ensure its continued adoption and actual use (Gunawan et al., 2023; Raisa et al., 2024). Consumers may evaluate digital payment technologies based on several considerations, including the extent to which the payment method reduces transaction-related risks, prior usage habits, enjoyment associated with the technology, and the economic value derived from its use (Venkatesh et al., 2012; Wardani et al., 2024). Greater perceived safety and risk reduction may strengthen consumers' confidence in digital payment systems, while repeated usage, enjoyable experiences, and favorable assessments of benefits relative to costs may further encourage continued adoption (Venkatesh et al., 2012).

The technology-adoption literature has extensively employed the Unified Theory of Acceptance and Use of Technology (UTAUT) and its extension, UTAUT2, to explain individuals' adoption of digital technologies. UTAUT2 extends the original framework by incorporating consumer-oriented determinants, including hedonic motivation, price value, and habit (Venkatesh et al., 2012). These constructs are particularly relevant in consumer payment settings because technology adoption is not determined solely by functional characteristics but also by experiential, behavioral, and economic considerations (Nuswantoro et al., 2024; Venkatesh et al., 2012).

Although prior studies have examined QRIS adoption, several limitations remain. Existing studies have frequently focused on merchant-side adoption, particularly among Micro, Small, and Medium Enterprises (MSMEs), rather than on consumers' actual payment behavior (Afan Suyanto et al., 2024; Raisa et al., 2024). Other studies have concentrated on specific geographical areas, such as Jabodetabek, or on particular digital payment applications, thereby limiting the extent to which their findings explain QRIS adoption across different consumption settings (Hafifah et al., 2022; Paramita & Cahyadi, 2024). More importantly, prior evidence remains fragmented regarding how consumer-oriented UTAUT2 determinants jointly shape both behavioral intention and actual use behavior (Zhang et al., 2022). In particular, the mechanisms through which habit, hedonic motivation, and price value translate into actual QRIS usage through behavioral intention remain insufficiently understood (Afan Suyanto et al., 2024; Hafifah et al., 2022; Venkatesh et al., 2012).

A further limitation concerns the role of perceived risk reduction in digital payment adoption (Paramita & Cahyadi, 2024). UTAUT2 emphasizes motivational and economic determinants of consumer technology use but does not explicitly capture consumers' perceptions that a digital payment technology can reduce transaction-related risks (Alfani & Ariani, 2023; Venkatesh et al., 2012). This issue is particularly relevant in financial technology because users may evaluate whether a payment method lowers exposure to fraud, cash loss, transaction errors, or other payment-related concerns (Alfani & Ariani, 2023). Incorporating perceived risk reduction into UTAUT2 therefore provides a broader explanation of QRIS adoption by considering consumers' perceptions of safety alongside the behavioral, experiential, and economic benefits of digital payment use (Paramita & Cahyadi, 2024; Venkatesh et al., 2012).

This study addresses these gaps by examining QRIS adoption among cinema consumers in Batam City through a modified UTAUT2 framework. The cinema setting provides a relevant consumption context because consumers frequently choose among alternative payment methods when purchasing tickets or related products. Unlike studies that focus primarily on merchants' adoption decisions, this study examines how consumers' perceptions and

experiences influence their willingness to use QRIS and, importantly, whether such willingness translates into actual usage.

Specifically, this study examines perceived risk reduction, habit, hedonic motivation, and price value as determinants of both behavioral intention and use behavior. It further investigates the role of behavioral intention as a mediating mechanism linking these determinants to actual QRIS usage. This distinction is theoretically important because intention and actual behavior represent different stages of technology acceptance (Venkatesh et al., 2012; Zhang et al., 2022). While behavioral intention reflects an individual's willingness or commitment to use a technology, use behavior represents the realization of such intention through actual usage (Venkatesh et al., 2003, 2012).

This study contributes to the digital-payment adoption literature in three respects. First, it extends UTAUT2 by incorporating perceived risk reduction, thereby capturing consumers' perceptions that QRIS can reduce payment-related risks alongside the behavioral, experiential, and economic determinants of adoption (Alfani & Ariani, 2023; Venkatesh et al., 2012). Second, it distinguishes between the direct effects of consumer-related determinants on actual usage and their indirect effects through behavioral intention, providing a more comprehensive explanation of how intention is translated into behavior (Paramita & Cahyadi, 2024). Third, it extends the empirical context of QRIS research by examining consumer adoption in the cinema sector in Batam City, a setting that has received relatively limited attention in previous QRIS studies (Afan Suyanto et al., 2024; Ciptowati & Setiawan, 2024).

Accordingly, this study provides a more integrated understanding of the psychological, behavioral, experiential, and economic mechanisms underlying consumers' adoption and actual use of QRIS.

2. LITERATURE REVIEW

2.1 THEORETICAL FOUNDATION

The Unified Theory of Acceptance and Use of Technology (UTAUT) was developed by Venkatesh et al. (2003) to integrate several established theories of technology acceptance into a unified framework. The model explains individuals' intentions to adopt technology and their subsequent usage behavior by identifying key determinants of technology acceptance. Owing to its integrative nature and explanatory capacity, UTAUT has been extensively applied across various technological settings, including digital-payment adoption (Auliya & Arransyah, 2023; Paramita & Cahyadi, 2024).

Venkatesh et al. (2012) subsequently extended UTAUT to the consumer context through UTAUT2. The extended framework incorporates three additional constructs: hedonic motivation, price value, and habit. These constructs recognize that consumers' adoption decisions extend beyond instrumental evaluations of technological usefulness. Consumers may adopt technologies because they derive enjoyment from their use, perceive favorable economic value, or develop automatic usage patterns through repeated experience.

UTAUT2 is particularly appropriate for examining digital payment systems because such technologies are embedded in routine consumer transactions. The continued use of QRIS may therefore depend not only on users' rational assessment of the technology but also on their accumulated experiences, behavioral routines, and perceptions of value. Previous studies have demonstrated the applicability of UTAUT2 in explaining digital-payment and QRIS adoption in Indonesia (Nuswantoro et al., 2024; Paramita & Cahyadi, 2024).

However, the original UTAUT2 framework does not explicitly capture consumers' perceptions that a digital payment technology can reduce transaction-related risks (Venkatesh et al., 2012). Accordingly, this study extends UTAUT2 by incorporating perceived risk reduction. The resulting framework focuses on four determinants—perceived risk reduction, habit, hedonic motivation, and price value—and examines their relationships with behavioral intention and use behavior (Hafifah et al., 2022; Paramita & Cahyadi, 2024).

2.2 HYPOTHESIS DEVELOPMENT / CONCEPTUAL DEVELOPMENT

Use Behavior

Use behavior refers to an individual's actual utilization of a technology and represents the behavioral outcome of the technology-adoption process (Venkatesh et al., 2003). Unlike behavioral intention, which reflects an individual's willingness or plan to use a technology, use behavior captures the extent to which the technology is actually incorporated into users' activities.

In digital payment settings, use behavior can be reflected in the frequency, consistency, or intensity with which consumers employ a particular payment technology. For QRIS, actual usage indicates that consumers have moved beyond simply expressing favorable attitudes or intentions and have incorporated QRIS into their payment activities (Ciptowati & Setiawan, 2024).

The distinction between intention and actual usage is important because a favorable intention does not necessarily result in actual behavior (Venkatesh et al., 2003). Consequently, examining use behavior allows researchers to determine whether the determinants of technology acceptance ultimately translate into observable usage. Prior studies have similarly identified actual use as a critical outcome when evaluating digital-payment adoption (Ciptowati & Setiawan, 2024; Hafifah et al., 2022; Paramita & Cahyadi, 2024).

Perceived Risk Reduction and Use Behavior

Perceived risk refers to users' perceptions of uncertainty and potential negative consequences associated with using a technology (Xie et al., 2021). In digital payment environments, these risks may include concerns regarding financial losses, transaction errors, information privacy, security breaches, or technological failures (Patil et al., 2020; Xie et al., 2021).

When consumers perceive that QRIS can reduce transaction-related risks, they may feel more confident relying on the payment system for actual transactions (Alfani & Ariani, 2023). A stronger perception of safety can lower psychological barriers and make QRIS a more attractive payment option relative to cash or other methods (Xie et al., 2021). Accordingly, greater perceived risk reduction is expected to encourage actual QRIS usage (Alfani & Ariani, 2023; Xie et al., 2021). Thus:

H1a. Perceived Risk Reduction has a positive effect on Use Behavior.

Habit and Use Behavior

Habit refers to the extent to which individuals perform a behavior automatically as a consequence of prior learning and repeated experience (Venkatesh et al., 2012). Habit differs from deliberate intention because habitual behavior requires relatively limited conscious evaluation once a behavioral routine has been established (Nasution et al., 2024; Venkatesh et al., 2012).

Repeated use of QRIS can create familiarity with the payment process and gradually integrate QRIS into consumers' transactional routines. As usage becomes habitual, consumers may automatically select QRIS without repeatedly evaluating alternative payment methods (Venkatesh et al., 2012). Previous research provides evidence that habit positively influences technology use behavior (Nasution et al., 2024).

Accordingly, consumers with stronger QRIS usage habits are expected to use QRIS more frequently and consistently (Febriani et al., 2023). Therefore:

H1b. Habit has a positive effect on Use Behavior.

Hedonic Motivation and Use Behavior

Hedonic motivation refers to the enjoyment or pleasure derived from using a technology and represents an important determinant of consumer technology adoption in UTAUT2 (Venkatesh et al., 2012). Whereas utilitarian considerations emphasize functional benefits, hedonic motivation captures the experiential value associated with technology use (Hartelina et al., 2021).

Consumers may perceive QRIS transactions as convenient, seamless, and satisfying, particularly when the payment process reduces effort and facilitates faster transactions (Auliya & Arransyah, 2023). Positive usage experiences may encourage consumers to repeatedly select QRIS when making subsequent payments (Febriani et al., 2023). Previous studies have similarly demonstrated that enjoyable technology experiences can strengthen usage behavior (Aprilia et al., 2022). Hence:

H1c. Hedonic Motivation has a positive effect on Use Behavior.

Price Value and Use Behavior

Price value refers to consumers' cognitive evaluation of the trade-off between the benefits derived from a technology and the monetary costs associated with its use (Venkatesh et al., 2012). A positive price value arises when users perceive that the benefits of using a technology exceed the financial costs required to obtain those benefits (Cakici & Tekeli, 2022; Huang, 2024; Venkatesh et al., 2012).

In the context of QRIS, consumers may assess the economic attractiveness of using the payment method by considering transactional convenience, efficiency, promotional benefits, and potential costs (Cakici & Tekeli, 2022; Huang, 2024). A favorable benefit-cost assessment can increase the perceived attractiveness of QRIS and encourage consumers to incorporate it into actual transactions (Huang, 2024). Prior research indicates that favorable perceptions of value can positively influence technology adoption and usage (Goto & Munyai, 2022). Therefore:

H1d. Price Value has a positive effect on Use Behavior.

Behavioral Intention and Use Behavior

Behavioral intention refers to an individual's willingness or commitment to engage in a particular behavior and represents a central predictor of actual technology use within UTAUT and UTAUT2 (Venkatesh et al., 2003, 2012). Individuals who demonstrate stronger intentions to use a technology are more likely to subsequently incorporate that technology into their actual behavior (Afan Suyanto et al., 2024).

In the context of QRIS, behavioral intention reflects consumers' willingness to use or continue using QRIS in future transactions (Paramita & Cahyadi, 2024). Stronger intentions

should increase the likelihood that consumers select QRIS when an actual payment opportunity arises (Wibowo & Sobari, 2023). Empirical studies on QRIS adoption support this relationship, demonstrating that behavioral intention significantly predicts actual use (Kurniawan & Anandya, 2022; Paramita & Cahyadi, 2024; Wibowo & Sobari, 2023).

H2. Behavioral Intention has a positive effect on Use Behavior.

Perceived Risk Reduction and Behavioral Intention

Perceived risk reduction can influence technology adoption before actual usage occurs because consumers evaluate whether a payment technology provides a sufficiently safe and reliable transaction environment (Xie et al., 2021). When consumers believe that QRIS reduces transaction-related risks, they may develop greater confidence in using the technology (Alfani & Ariani, 2023).

In digital payments, consumers' perceptions that a payment method reduces financial, security, and transaction-related risks can strengthen their willingness to use it (Patil et al., 2020). In the context of QRIS, greater perceived safety and lower expected transaction risk should therefore encourage stronger behavioral intention (Alfani & Ariani, 2023; Xie et al., 2021). Thus:

H3a. Perceived Risk Reduction has a positive effect on Behavioral Intention.

Habit and Behavioral Intention

Habit can influence not only actual usage but also consumers' intention to continue using a technology (Venkatesh et al., 2012). Repeated prior behavior creates familiarity and reduces the cognitive effort required to decide whether to use the technology again (Nasution et al., 2024).

When QRIS has become embedded in consumers' payment routines, users are more likely to develop a stronger intention to continue using it (Febriani et al., 2023). Prior studies similarly document a positive relationship between habit and behavioral intention toward digital-payment technologies (Febriani et al., 2023; Nasution et al., 2024).

H3b. Habit has a positive effect on Behavioral Intention.

Hedonic Motivation and Behavioral Intention

UTAUT2 proposes that hedonic motivation influences behavioral intention because consumers are more likely to adopt technologies that provide enjoyable and satisfying experiences (Venkatesh et al., 2012). Positive emotions associated with technology use can strengthen the willingness to continue engaging with that technology (Hartelina et al., 2021).

In the context of QRIS, a convenient and satisfying payment experience may increase consumers' willingness to use QRIS in future transactions (Aprilia et al., 2022). Empirical evidence similarly demonstrates that hedonic motivation positively contributes to consumers' intention to use digital technologies (Aprilia et al., 2022; Hartelina et al., 2021).

H3c. Hedonic Motivation has a positive effect on Behavioral Intention.

Price Value and Behavioral Intention

Price value represents an important consideration in consumer technology adoption because consumers evaluate whether the expected benefits of using a technology justify its associated monetary costs (Venkatesh et al., 2012). When benefits exceed costs, users are more likely to develop favorable intentions toward continued usage (Huang, 2024).

For QRIS, consumers may perceive favorable value when convenience, transaction efficiency, and possible economic benefits outweigh the costs associated with using the payment system (Ciptowati & Setiawan, 2024). Previous studies demonstrate that price value can positively influence consumers' intention to adopt digital payment technologies ((Ciptowati & Setiawan, 2024; Istiqomah et al., 2024; Paramita & Cahyadi, 2024).

Accordingly:

H3d. Price Value has a positive effect on Behavioral Intention.

The Mediating Role of Behavioral Intention

Technology-related perceptions and experiences may influence actual usage not only directly but also indirectly through the formation of behavioral intention (Venkatesh et al., 2003). Within UTAUT, intention represents a central mechanism through which individuals' evaluations of technology are translated into subsequent behavior (Zhang et al., 2022).

In this study, perceived risk reduction, habit, hedonic motivation, and price value are expected to shape consumers' intentions toward QRIS, which subsequently influence actual usage (Paramita & Cahyadi, 2024). Greater perceived risk reduction is expected to strengthen behavioral intention and thereby increase actual use (Alfani & Ariani, 2023). Similarly, stronger habit, greater hedonic motivation, and higher price value are expected to strengthen behavioral intention and, in turn, increase actual QRIS use (Ciptowati & Setiawan, 2024; Febriani et al., 2023; Hartelina et al., 2021).

This mediating mechanism is theoretically important because the determinants of technology adoption may not necessarily produce actual behavior immediately (Goto & Munyai, 2022). Rather, users' perceptions and prior experiences may first shape their willingness to use the technology, after which such willingness is translated into actual transactional behavior (Kurniawan & Anandya, 2022). Accordingly, the following hypotheses are proposed:

H4a. Behavioral Intention mediates the positive relationship between Perceived Risk Reduction and Use Behavior.

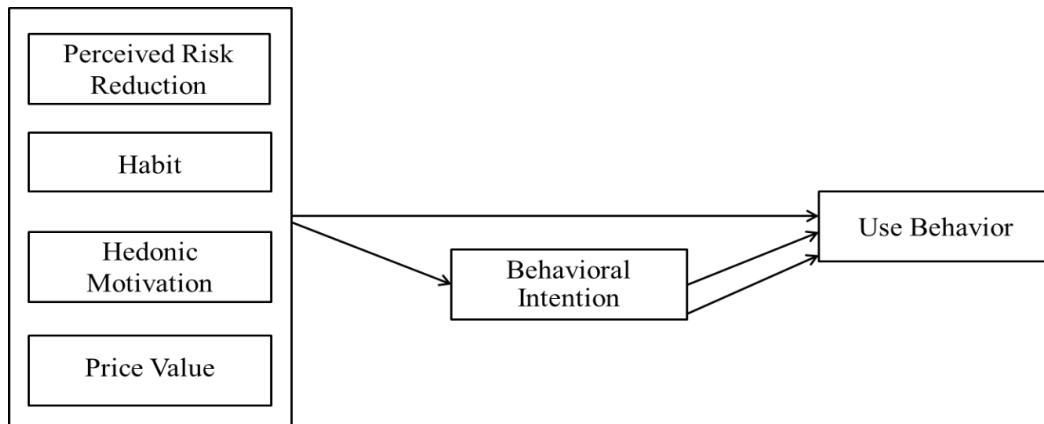
H4b. Behavioral Intention mediates the positive relationship between Habit and Use Behavior.

H4c. Behavioral Intention mediates the positive relationship between Hedonic Motivation and Use Behavior.

H4d. Behavioral Intention mediates the positive relationship between Price Value and Use Behavior.

2.3 RESEARCH / CONCEPTUAL FRAMEWORK

Figure 1. Conceptual Framework



Source: Data processed by researchers (2026).

3. METHOD

3.1 RESEARCH DESIGN AND DATA COLLECTION

This study employed a quantitative cross-sectional design to examine the determinants of Behavioral Intention and Use Behavior in QRIS adoption among cinema consumers in Batam City. The research model was developed based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), incorporating Perceived Risk Reduction (PRR), Habit (HBT), Hedonic Motivation (HMN), and Price Value (PVE) as antecedents of Behavioral Intention (BIN) and Use Behavior (UBR). Behavioral Intention was further examined as a mediating mechanism linking these determinants to QRIS use.

The target population consisted of consumers residing in Batam City who had experience using QRIS for transactions in cinemas. Because the exact population size could not be determined, purposive sampling was employed. Respondents were required to (1) reside in Batam City and (2) have previously used QRIS as a payment method in cinemas. A total of 204 valid responses were obtained and included in the analysis.

3.2 MEASUREMENT / RESEARCH INSTRUMENT

Primary data were collected through an online questionnaire distributed using Google Forms. All measurement items were assessed using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The research instrument consisted of five indicators for Perceived Risk Reduction, three indicators for Habit, three indicators for Hedonic Motivation, three indicators for Price Value, three indicators for Behavioral Intention, and four indicators for Use Behavior. The measurement items were adapted to the context of QRIS transactions in cinemas at Batam City, as presented in Table 1.

Table 1. Measurement Items

Construct	Code	Measurement Item
Perceived Risk Reduction (PRR)	PRR1	I feel that transactions using QRIS are safer and can reduce the risk of fraud or crime.
	PRR2	I consider QRIS to be the safest payment method compared with other payment methods when conducting transactions at cinemas.
	PRR3	QRIS helps reduce the risk of losing cash when I visit a cinema.
	PRR4	Using QRIS at cinemas helps me avoid transaction errors.

Construct	Code	Measurement Item
Habit (HBT)	PRR5	QRIS reduces the possibility of receiving counterfeit or damaged change when conducting transactions.
	HBT1	I am accustomed to using QRIS whenever I conduct transactions at cinemas.
	HBT2	I use QRIS without having to think extensively about it.
	HBT3	Using QRIS at cinemas has become part of my daily habit.
Hedonic Motivation (HMN)	HMN1	I feel that using QRIS at cinemas is efficient.
	HMN2	I enjoy the experience of conducting transactions using QRIS at cinemas.
	HMN3	I feel satisfied when using QRIS for payments at cinemas.
Price Value (PVE)	PVE1	The price-related benefits offered when using QRIS at cinemas, such as cashback promotions, make it more affordable than other payment methods.
	PVE2	Using QRIS when purchasing cinema tickets is financially beneficial to me.
	PVE3	Using QRIS provides benefits that exceed the costs incurred, such as administrative fees.
Behavioral Intention (BIN)	BIN1	I intend to continue using QRIS to pay for cinema tickets or food and beverages purchased at cinemas.
	BIN2	I plan to use QRIS when visiting cinemas regardless of their location.
	BIN3	I intend to use QRIS whenever I need to pay for goods or services.
Use Behavior (UBR)	UBR1	I regularly use QRIS when conducting transactions at cinemas.
	UBR2	I tend to choose QRIS over other payment methods when conducting transactions at cinemas.
	UBR3	I frequently recommend the use of QRIS to friends or family members who are going to the cinema.
	UBR4	I always ensure that a QRIS payment option is available when conducting transactions at cinemas.

Source: Research questionnaire.

3.3 DATA ANALYSIS

The research model was analyzed using partial least squares structural equation modeling (PLS-SEM) with SmartPLS 4. The analysis involved measurement-model assessment, structural-model assessment, and hypothesis testing. The measurement model was evaluated using outer loadings, Cronbach's alpha, rho_A, composite reliability (rho_C), and average variance extracted (AVE). Indicator loadings of approximately 0.708 or higher were considered desirable, while internal consistency reliability was considered satisfactory when Cronbach's alpha, rho_A, and composite reliability exceeded 0.70. Convergent validity was established when AVE exceeded 0.50. Discriminant validity was assessed primarily using the heterotrait-monotrait ratio (HTMT), supplemented by bootstrap-based HTMT inference and the Fornell–Larcker criterion.

The structural model was evaluated using the variance inflation factor (VIF), coefficient of determination (R^2), effect size (f^2), and supplementary model-fit indices. VIF was used to assess multicollinearity, while R^2 indicated the explanatory power of the endogenous constructs. Effect sizes were interpreted using f^2 values of approximately 0.02, 0.15, and 0.35 as small, medium, and large effects, respectively. SRMR, d_ULS, d_G, chi-square, and NFI were additionally reported as supplementary model-fit information.

Hypothesis testing was performed using bootstrapping with 5,000 subsamples and a two-tailed significance level of 5%. Direct relationships were evaluated using standardized path

coefficients (β), t-statistics, and p-values. Behavioral Intention was also examined as a mediator through the specific indirect effects of PRR, HBT, HMN, and PVE on Use Behavior. An effect was considered statistically significant when $p < 0.05$.

4. RESULTS AND DISCUSSION

4.1 RESULTS

Respondent Characteristics

A total of 204 valid responses were included in the final analysis. The demographic characteristics of the respondents were examined to provide an overview of the sample profile. The distribution of respondents according to gender, age, occupation, and other relevant characteristics is presented in the respondent characteristics table.

Measurement Model Assessment

The measurement model was evaluated based on indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. As shown in Table 2, the outer loadings ranged from 0.686 to 0.939. Most indicators exceeded the recommended value of approximately 0.708. PRR3 (0.686) and PRR5 (0.690) were slightly below this value but were retained because the Perceived Risk Reduction construct demonstrated satisfactory reliability and convergent validity.

Cronbach's alpha values ranged from 0.735 to 0.895, rho_A values ranged from 0.779 to 0.897, and composite reliability values ranged from 0.846 to 0.935. All values exceeded the minimum criterion of 0.70. In addition, AVE values ranged from 0.554 to 0.827 and were above the recommended threshold of 0.50. Therefore, all constructs demonstrated satisfactory internal consistency reliability and convergent validity.

Table 2. Measurement Model Assessment

Construct	Outer Loading Range	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Behavioral Intention	0.828–0.926	0.863	0.874	0.917	0.786
Habit	0.815–0.900	0.841	0.853	0.904	0.759
Hedonic Motivation	0.882–0.939	0.895	0.897	0.935	0.827
Perceived Risk Reduction	0.686–0.809	0.798	0.803	0.861	0.554
Price Value	0.720–0.874	0.735	0.779	0.846	0.648
Use Behavior	0.751–0.890	0.855	0.879	0.901	0.697

Source: Data processed by researchers (2026).

Discriminant validity was assessed primarily using the heterotrait-monotrait ratio (HTMT). Most HTMT values were below 0.90, although Habit–Behavioral Intention (0.916) and Use Behavior–Behavioral Intention (0.923) marginally exceeded this threshold. Bootstrap-based HTMT inference was therefore examined. The 95% confidence intervals for these two relationships were 0.845–0.980 and 0.876–0.971, respectively, and the confidence intervals for all construct pairs excluded 1.00. These results indicate that the constructs remained empirically distinguishable.

Table 3. Heterotrait-Monotrait Ratio (HTMT)

Construct	BIN	HBT	HMN	PRR	PVE	UBR
Behavioral Intention (BIN)	—					

Construct	BIN	HBT	HMN	PRR	PVE	UBR
Habit (HBT)	0.916	—				
Hedonic Motivation (HMN)	0.861	0.866	—			
Perceived Risk Reduction (PRR)	0.889	0.768	0.756	—		
Price Value (PVE)	0.826	0.702	0.761	0.755	—	
Use Behavior (UBR)	0.923	0.846	0.729	0.783	0.796	—

Source: Data processed by researchers (2026).

The Fornell–Larcker criterion provided additional evidence of discriminant validity. As shown in Table 4, the square root of the AVE for each construct exceeded its correlations with the other constructs. For example, the square root of AVE for Behavioral Intention was 0.887, exceeding its highest correlation of 0.809 with Use Behavior. Similarly, the value for Perceived Risk Reduction was 0.745, slightly exceeding its correlation of 0.739 with Behavioral Intention. Overall, the measurement model demonstrated satisfactory reliability, convergent validity, and discriminant validity.

Table 4. Fornell–Larcker Criterion

Construct	BIN	HBT	HMN	PRR	PVE	UBR
Behavioral Intention (BIN)	0.887					
Habit (HBT)	0.788	0.871				
Hedonic Motivation (HMN)	0.763	0.747	0.909			
Perceived Risk Reduction (PRR)	0.739	0.638	0.642	0.745		
Price Value (PVE)	0.686	0.582	0.641	0.622	0.805	
Use Behavior (UBR)	0.809	0.749	0.657	0.662	0.656	0.835

Note: Bold diagonal values represent the square root of AVE.

Source: Data processed by researchers (2026).

Structural Model Assessment

The structural model was assessed using the variance inflation factor (VIF), coefficient of determination (R^2), effect size (f^2), and supplementary model-fit indices. The VIF values ranged from 1.966 to 4.188 and were below the prespecified threshold of 10, indicating the absence of severe multicollinearity among the predictor constructs.

Table 5. Collinearity Assessment

Relationship	VIF
Behavioral Intention → Use Behavior	4.188
Habit → Behavioral Intention	2.528
Habit → Use Behavior	3.067
Hedonic Motivation → Behavioral Intention	2.759
Hedonic Motivation → Use Behavior	2.947
Perceived Risk Reduction → Behavioral Intention	2.093
Perceived Risk Reduction → Use Behavior	2.387
Price Value → Behavioral Intention	1.966
Price Value → Use Behavior	2.097

Source: Data processed by researchers (2026).

The model explained 76.1% of the variance in Behavioral Intention ($R^2 = 0.761$; adjusted $R^2 = 0.756$) and 70.5% of the variance in Use Behavior ($R^2 = 0.705$; adjusted $R^2 = 0.698$). These results indicate considerable explanatory power for both endogenous constructs.

Table 6. Coefficient of Determination

Endogenous Construct	R ²	Adjusted R ²
Behavioral Intention	0.761	0.756
Use Behavior	0.705	0.698

Source: Data processed by researchers (2026).

Regarding effect sizes, Habit had a medium effect on Behavioral Intention ($f^2 = 0.213$), while Behavioral Intention had a medium effect on Use Behavior ($f^2 = 0.172$). Perceived Risk Reduction, Hedonic Motivation, and Price Value produced small effects on Behavioral Intention. For Use Behavior, Habit and Price Value showed small effects, whereas Perceived Risk Reduction and Hedonic Motivation showed negligible direct effects.

Table 7. Effect Size Assessment

Relationship	f ²	Interpretation
Behavioral Intention → Use Behavior	0.172	Medium
Habit → Behavioral Intention	0.213	Medium
Habit → Use Behavior	0.093	Small
Hedonic Motivation → Behavioral Intention	0.068	Small
Hedonic Motivation → Use Behavior	0.005	Negligible
Perceived Risk Reduction → Behavioral Intention	0.140	Small
Perceived Risk Reduction → Use Behavior	0.008	Negligible
Price Value → Behavioral Intention	0.066	Small
Price Value → Use Behavior	0.045	Small

Source: Data processed by researchers (2026).

Model-fit statistics were additionally reported as supplementary information. The SRMR was 0.087, while d_ULS, d_G, chi-square, and NFI were 1.764, 0.633, 735.919, and 0.770, respectively. These statistics were interpreted as supplementary information rather than standalone criteria for accepting or rejecting the PLS-SEM model.

Table 8. Model Fit Assessment

Fit Measure	Saturated Model	Estimated Model
SRMR	0.087	0.087
d_ULS	1.764	1.764
d_G	0.633	0.633
Chi-square	735.919	735.919
NFI	0.770	0.770

Source: Data processed by researchers (2026).

Hypothesis Testing and Mediation Analysis

The proposed hypotheses were tested using bootstrapping with 5,000 subsamples and a two-tailed significance level of 5%. As shown in Table 9, Behavioral Intention had a positive and significant effect on Use Behavior ($\beta = 0.460$, $p < 0.001$), supporting H2. Habit significantly influenced both Behavioral Intention ($\beta = 0.359$, $p < 0.001$) and Use Behavior ($\beta = 0.290$, $p < 0.001$), supporting H3b and H1b.

Hedonic Motivation had a positive and significant effect on Behavioral Intention ($\beta = 0.212$, $p = 0.001$), supporting H3c, but its direct effect on Use Behavior was insignificant ($\beta = 0.066$, $p = 0.521$); therefore, H1c was not supported. Price Value significantly influenced both

Behavioral Intention ($\beta = 0.176$, $p = 0.009$) and Use Behavior ($\beta = 0.167$, $p = 0.013$), supporting H3d and H1d. Perceived Risk Reduction significantly increased Behavioral Intention ($\beta = 0.265$, $p < 0.001$), supporting H3a, but did not directly influence Use Behavior ($\beta = 0.075$, $p = 0.264$); therefore, H1a was not supported.

Table 9. Direct-Effect Hypothesis Testing

Hypothesis	Relationship	β	t-statistic	p-value	Conclusion
H1a	Perceived Risk Reduction $\rightarrow$ Use Behavior	0.075	1.118	0.264	Not supported
H1b	Habit $\rightarrow$ Use Behavior	0.290	3.533	<0.001	Supported
H1c	Hedonic Motivation $\rightarrow$ Use Behavior	□ 0.066	0.642	0.521	Not supported
H1d	Price Value $\rightarrow$ Use Behavior	0.167	2.486	0.013	Supported
H2	Behavioral Intention $\rightarrow$ Use Behavior	0.460	4.394	<0.001	Supported
H3a	Perceived Risk Reduction $\rightarrow$ Behavioral Intention	0.265	4.771	<0.001	Supported
H3b	Habit $\rightarrow$ Behavioral Intention	0.359	5.697	<0.001	Supported
H3c	Hedonic Motivation $\rightarrow$ Behavioral Intention	0.212	3.263	0.001	Supported
H3d	Price Value $\rightarrow$ Behavioral Intention	0.176	2.625	0.009	Supported

Source: Data processed by researchers (2026).

The mediation analysis showed that all four specific indirect effects were statistically significant. Behavioral Intention mediated the effects of Perceived Risk Reduction ($\beta = 0.122$, $p = 0.002$), Habit ($\beta = 0.165$, $p = 0.001$), Hedonic Motivation ($\beta = 0.098$, $p = 0.004$), and Price Value ($\beta = 0.081$, $p = 0.031$) on Use Behavior. Accordingly, H4a–H4d were supported.

The insignificant direct effects of Perceived Risk Reduction and Hedonic Motivation on Use Behavior, combined with their significant indirect effects, indicate indirect-only mediation. In contrast, Habit and Price Value showed significant direct and indirect effects in the same direction, indicating complementary mediation.

Table 10. Indirect-Effect Hypothesis Testing

Hypothesis	Indirect Relationship	β	t-statistic	p-value	Conclusion
H4a	Perceived Risk Reduction $\rightarrow$ Behavioral Intention $\rightarrow$ Use Behavior	0.122	3.151	0.002	Supported
H4b	Habit $\rightarrow$ Behavioral Intention $\rightarrow$ Use Behavior	0.165	3.300	0.001	Supported
H4c	Hedonic Motivation $\rightarrow$ Behavioral Intention $\rightarrow$ Use Behavior	0.098	2.907	0.004	Supported
H4d	Price Value $\rightarrow$ Behavioral Intention $\rightarrow$ Use Behavior	0.081	2.162	0.031	Supported

Source: Data processed by researchers (2026).

4.2 DISCUSSION

The findings demonstrate that Behavioral Intention plays a central role in explaining QRIS usage among cinema consumers in Batam City. Behavioral Intention had the strongest direct effect on Use Behavior ($\beta = 0.460$), supporting the central proposition of UTAUT and UTAUT2 that intention is an important antecedent of actual technology use (Venkatesh et al., 2003, 2012). Consumers with stronger intentions to use QRIS are therefore more likely to translate these intentions into actual payment behavior. This finding is consistent with previous studies demonstrating a significant relationship between behavioral intention and digital-payment usage (Kurniawan & Anandya, 2022; Paramita & Cahyadi, 2024; Wibowo & Sobari, 2023).

Habit significantly influenced both Behavioral Intention and Use Behavior and showed a medium effect on Behavioral Intention. This finding indicates that repeated QRIS usage can gradually become embedded in consumers' payment routines, strengthening both their intention to continue using QRIS and their actual usage (Febriani et al., 2023). The significant indirect effect through Behavioral Intention further suggests that Habit operates through both direct and intention-mediated pathways (Nasution et al., 2024). This result is consistent with UTAUT2, which emphasizes the importance of habitual behavior in continued technology use (Venkatesh et al., 2012).

Hedonic Motivation significantly influenced Behavioral Intention but did not directly affect Use Behavior. This finding suggests that enjoyable and satisfying QRIS experiences primarily strengthen consumers' willingness to continue using the technology rather than immediately producing actual usage (Hartelina et al., 2021). Its significant indirect effect further confirms that the influence of Hedonic Motivation on Use Behavior operates through Behavioral Intention (Aprilia et al., 2022). This finding supports the UTAUT2 perspective that enjoyment is an important motivational determinant of consumers' technology-use intentions (Venkatesh et al., 2012).

Price Value positively influenced both Behavioral Intention and Use Behavior. Consumers who perceive QRIS as providing favorable economic benefits are more likely both to intend to use and actually use the payment method (Ciptowati & Setiawan, 2024). The significant direct and indirect effects indicate that Price Value operates through complementary pathways (Paramita & Cahyadi, 2024). This finding supports the UTAUT2 proposition that consumers' evaluations of benefits relative to costs contribute to technology adoption (Venkatesh et al., 2012).

Perceived Risk Reduction significantly increased Behavioral Intention but did not directly affect Use Behavior. Consumers who perceive QRIS as safer and capable of reducing payment-related risks therefore demonstrate stronger intentions to continue using it, although perceived safety alone does not directly determine actual usage (Alfani & Ariani, 2023). The significant indirect effect indicates that Perceived Risk Reduction influences Use Behavior primarily through Behavioral Intention (Xie et al., 2021). Thus, perceptions of transaction safety appear to encourage QRIS usage by first strengthening consumers' willingness to use the payment method (Patil et al., 2020).

Overall, the mediation findings reinforce the central role of Behavioral Intention in translating consumers' evaluations and experiences into QRIS usage. Habit and Price Value influence Use Behavior through both direct and indirect pathways, whereas Hedonic Motivation and Perceived Risk Reduction operate primarily through Behavioral Intention. The model explains 76.1% of the variance in Behavioral Intention and 70.5% of the variance in Use Behavior, indicating considerable explanatory power and supporting the usefulness of the modified UTAUT2 framework in explaining QRIS adoption among cinema consumers.

5. CONCLUSION

This study examines the determinants of Behavioral Intention and Use Behavior in QRIS adoption among cinema consumers in Batam City using a modified UTAUT2 framework. The results show that Behavioral Intention significantly increases Use Behavior, confirming its central role in translating consumers' evaluations into actual QRIS usage. Habit and Price Value positively influence both Behavioral Intention and Use Behavior, while Hedonic

Motivation significantly affects Behavioral Intention but has no significant direct effect on Use Behavior. Perceived Risk Reduction significantly strengthens Behavioral Intention but does not directly influence Use Behavior. Overall, the model explains 76.1% of the variance in Behavioral Intention and 70.5% of the variance in Use Behavior.

The mediation results further demonstrate that Behavioral Intention plays an important role in linking consumer-related determinants to actual QRIS usage. Behavioral Intention mediates the effects of Perceived Risk Reduction, Habit, Hedonic Motivation, and Price Value on Use Behavior. Habit and Price Value operate through both direct and indirect pathways, whereas Perceived Risk Reduction and Hedonic Motivation influence actual usage primarily through Behavioral Intention. These findings suggest that QRIS providers and cinema operators should encourage repeated usage, maintain safe and satisfying transaction experiences, and provide economic benefits that strengthen consumers' intention to continue using QRIS.

This study is limited to cinema consumers in Batam City and employs a cross-sectional design. Future research may examine QRIS adoption across different regions and transaction settings, employ longitudinal approaches, and incorporate additional factors such as trust, perceived security, social influence, facilitating conditions, and digital literacy. Future studies may also distinguish among specific dimensions of transaction risk reduction to provide a more detailed understanding of how perceived safety shapes digital-payment adoption.

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