International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

Antecedents of Perceived Usefulness in the Continuance Usage Intention of QRIS Merchant Services: An Empirical Study of Users in Solo City, Indonesia

Ilham Nurhidayah[1], Retno Tanding Suryandari[2]
[1] Master Student, Master of Management, Faculty of Economics and Business, Sebelas Maret University Surakarta, Indonesia
[2] Associate Professor, Master of Management, Faculty of Economics and Business, Sebelas Maret University Surakarta, Indonesia

ABSTRACT: This study aimed to investigate the antecedents of perceived usefulness in the continuance usage intention of QRIS merchant services in Solo City, drawing upon the Expectation Confirmation Model (ECM) and extending it with facilitating conditions and perceived risk. The cross-sectional survey data from 201 merchants using QRIS in Solo City and analyzed it using Smart-PLS. This study showed that confirmation significantly impacts perceived usefulness but does not directly affect satisfaction, indicating that the influence of confirmation on satisfaction operates through the mediating mechanism of perceived usefulness. Satisfaction emerges as the primary driver of continuance usage intention, confirming its central role in post-adoption behavior. Facilitating conditions significantly enhance perceived usefulness, while perceived risk diminishes it. Perceived usefulness significantly influences satisfaction but does not directly affect continuance usage intention. The mediating analysis revealed that perceived usefulness fully mediates the confirmation-satisfaction relationship, while satisfaction does not mediate the perceived usefulness-continuance intention relationship. The results of this study confirmed the substantial role of cognitive and affective factors in shaping continuance usage intention. This research contributes to the development of theory by validating the relationships drawn from the Expectation Confirmation Model, and the novelty is the introduction of facilitating conditions and perceived risk as antecedents of perceived usefulness in the ECM framework. The research findings provide some practical implications and valuable insights for QRIS service providers, policymakers, and merchants in the environmental condition where technological and economic changes may occur at any time without certainty.

KEYWORDS: Perceived Usefulness, Continuance Usage Intention, Facilitating Conditions; Perceived Risk, QRIS

INTRODUCTION

Present The digital economy has grown up as a powerful driver of global economic transformation, fundamentally reshaping how commercial activities are conducted. Central to this shift is the fast evolution of electronic payment methods, which have become an indispensable aspect of routine transactions, providing unparalleled convenience, speed, and security (Wen, 2024) . In Indonesia, this digital financial landscape has seen the introduction of the Quick Response Code Indonesian Standard (QRIS), a national standard launched by Bank Indonesia in 2019 to unify the myriad of existing QR codes from multiple payment service providers (Bank Indonesia, 2019). By allowing interoperability between different e-wallets and mobile banking applications, QRIS aims to streamline non-cash transactions, foster financial inclusion, and support the growth of Micro, Small, and Medium Enterprises (MSMEs), which are the backbone of the national economy.

The adoption of QRIS among merchants, particularly UMKM, has grown significantly, with transaction volumes and user numbers consistently surpassing national targets (Rainner, 2024). For merchants, the benefits of adopting QRIS are multifaceted, including enhanced transaction efficiency, reduced risk of handling counterfeit cash, automated financial records, and the potential to attract a broader, tech-savvy customer base (Andina Dwijayant et al., 2022) . However, despite its widespread adoption, the long-term prosperity of QRIS as a digital payment infrastructure depends not merely on initial acceptance but on the continuance intention of its users. A critical challenge for any information system is ensuring that users do not discontinue its use after an initial trial (Bhattacherjee, 2001). Therefore, understanding the factors that drive merchants' intentions to continue using QRIS is of paramount importance for policymakers and service providers.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

While prior research has examined the adoption of QRIS, there is a notable gap in understanding the post-adoption behavior, particularly, the antecedents of perceived usefulness and their subsequent affect on continuance intention from the merchant's perspective. Most studies focus on consumer adoption, leaving a gap in knowledge regarding the factors that sustain merchant loyalty. Furthermore, the exploration of perceived usefulness as a mediating mechanism, influenced by both cognitive (confirmation) and contextual (facilitating conditions, perceived risk) factors, remains underexplored in the context of merchant payment systems. Research indicates that while perceived usefulness is a key predictor of continuance intention, its effect can be indirect, and its own antecedents can vary based on the user and context (Akdim, Casaló, & Flavián, 2022; Herawati & Mukhsin, 2023).

To address this gap, this study draws upon the robust theoretical framework of the Expectation Confirmation Model (ECM), originally developed by Bhattacherjee (2001) to explain information systems continuance. The ECM posits that users' intention to continue using a system is determined primarily by their satisfaction, that is itself influenced by their confirmation of expectations and perceived usefulness. This model is very appropriate for this investigation as it shifts the focus from initial adoption to sustained usage. This research extends the ECM by incorporating two external contextual factors as antecedents of perceived usefulness: facilitating conditions, representing the availability of technical and organizational resources (Venkatesh, Morris, Davis, & Davis, 2003), and perceived risk, reflecting the user's uncertainty and potential negative consequences (Pathak & Pathak, 2017).

This study aims to empirically investigate a moderated mediation model of continuance intention, focusing on merchant users of QRIS in Surakarta (Solo), a city in Central Java with high economic growth and a dominant UMKM sector (Pujianto & Marwati, 2024). Specifically, this research probes: (1) the direct effects of confirmation, facilitating conditions, and perceived risk on perceived usefulness; (2) the direct effects of perceived usefulness and confirmation on satisfaction; (3) the direct effect of satisfaction on continuance intention; and (4) the mediating role of perceived usefulness in the relationship between confirmation and satisfaction, and the mediating role of satisfaction in the relationship between perceived usefulness and continuance intention.

The novelty of this study lies in its integrated examination of perceived usefulness as a central mediating construct within an extended ECM framework, specifically tailored to B2B-like merchant users of a national digital payment standard. By simultaneously testing the roles of facilitating conditions and perceived risk as direct antecedents of perceived usefulness, this research offers a deeper comprehension of what makes merchants perceive QRIS as beneficial beyond their initial expectations. This study supports theoretical growth of continuance models by validating and extending the ECM in a novel context of mandatory interoperability standards. The findings provide crucial practical insights for Bank Indonesia and payment service providers, guiding strategies to enhance system reliability, mitigate user risk perceptions, and ultimately foster a sustainable digital payment ecosystem.

METHODOLOGY

Study design and setting

This study uses a quantitative research approach (Creswell & Creswell, 2018) with a cross-sectional survey design (Sreejesh, Mohapatra, & Anusree, 2014).

Participants, samples, and data collection

Based on a significance level of 0,05, a minimum path coefficient of 0.2 (Hair et al., 2022), and the 26 indicator items in the model, the required sample size was calculated as 155 respondents. To ensure robustness, data from 201 valid respondents were ultimately collected and analyzed which have been using QRIS for more than one year and possess official business legality. Primary data were collected through a self-administered online questionnaire distributed via the Google Forms. The questionnaire contains demographic information about the participants, including type of business, business age, monthly revenue. Variable measurements had a 5 (five) points Likert scale (Sreejesh et al., 2014; Cohen et al., 2018).

Research Instrumet

The instrument was developed based on validated scales from prior studies to ensure content validity. Confirmation (C) Measured using five items adapted from Oghuma et al., (2015) and Bhattacherjee (2001), Facilitating Conditions (FC) Measured using four items adapted from Venkatesh et al., (2003) and Barata & Coelho (2021), Perceived Risk (PR) Measured using five items adapted from Pathak & Pathak (2017) and Bhukya & Singh (2015), Perceived Usefulness (PU): Measured using four items adapted from Ashaduzzaman et al., (2022) and Yasirandi & Thanasopon (2025), Satisfaction (S) Measured using four items adapted from

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

Nawawi & Puspitowati (2017) and Vaezi et al., (2016), Continuance Usage Intention (CUI): Measured using four items adapted from Khalil et al., (2020) and Wang & Lin (2021).

Analytical methods

Data analysis was performed using a two-stage approach with the Partial Least Squares Structural Equation Modeling (PLS-SEM) method, utilizing the SmartPLS software (version 3.2.9). PLS-SEM is a variance-based technique suitable for exploratory research and complex models with mediation effects Hair et al., (2017). The reflective measurement model, including indeks reliability (>0.708/0.40–0.70 with $AVE \geq 0.50$) and internal consistency reliability (0.70–0.95). Convergent validity ($AVE \geq 0.50$) and the discriminant validity appraisal ($HTMT < 0.9$) were utilized for the indeks validity appraisal (Hair et al., 2017; Hair, Howard, & Nitzl, 2020). Structural Equation Model measurement including, (*VIF*), R^2 values, f^2, Q^2, and *T-Test)* (Hair, Hult, Ringle, & Sarstedt, 2022). The Mediation effects were tested following the procedures outlined by (Hair et al., 2022).

RESULTS

Demographic of respondent

Based on the descriptive analysis of 201 respondents, the characteristic profiles of the business entities under study were obtained. In terms of business type, the majority operate within the food and beverage sector, accounting for 75 enterprises (37.31%). This is followed by grocery or stall businesses, comprising 53 enterprises (26.37%), and apparel or fashion businesses at 49 enterprises (24.38%). Service-oriented businesses were recorded at 21 enterprises (10.45%), while other business categories constituted only 3 enterprises (1.49%). This distribution underscores a predominant inclination towards sectors related to daily consumer needs. Regarding business age, most enterprises fall within the 1–3 year range, representing 94 businesses (46.77%), followed by those in the 4–6 year bracket at 74 businesses (36.82%). Businesses operating for over six years numbered only 21 (10.45%), while those under one year accounted for 12 enterprises (5.97%). This pattern suggests that the majority of businesses are currently in their nascent to growth stages, yet to achieve full maturity. In terms of monthly income, the largest cohort of enterprises reported earnings between IDR 10,000,000 and IDR 30,000,000, with 92 businesses (45.77%). Subsequently, 50 enterprises (24.88%) earned below IDR 10,000,000, while 46 businesses (22.89%) fell within the IDR 30,000,000 to IDR 50,000,000 range. Only a marginal fraction, 13 businesses (6.47%), reported earnings exceeding IDR 50,000,000. The data indicates that the preponderance of the surveyed enterprises can be classified within the small to medium enterprise category.

Reflective measurement model evaluation

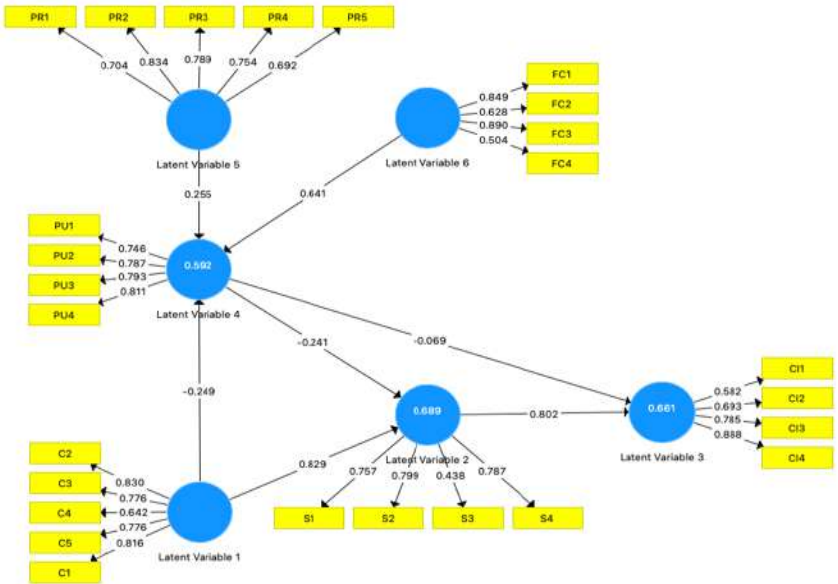

Figure 1: Result of Measurement Model

Source: *Data Prepared (2026)*

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

The most loading factor is> 0.708, and several items are below 0.708. All *AVE* > 0.5 were obtained. The composite reliability value ranges from 0.816–0.892 (0.80—0.90). The study model's *HTMT* < 0.9 was substantial. All measurement model findings demonstrate good outer models.

Structural equation model measurement

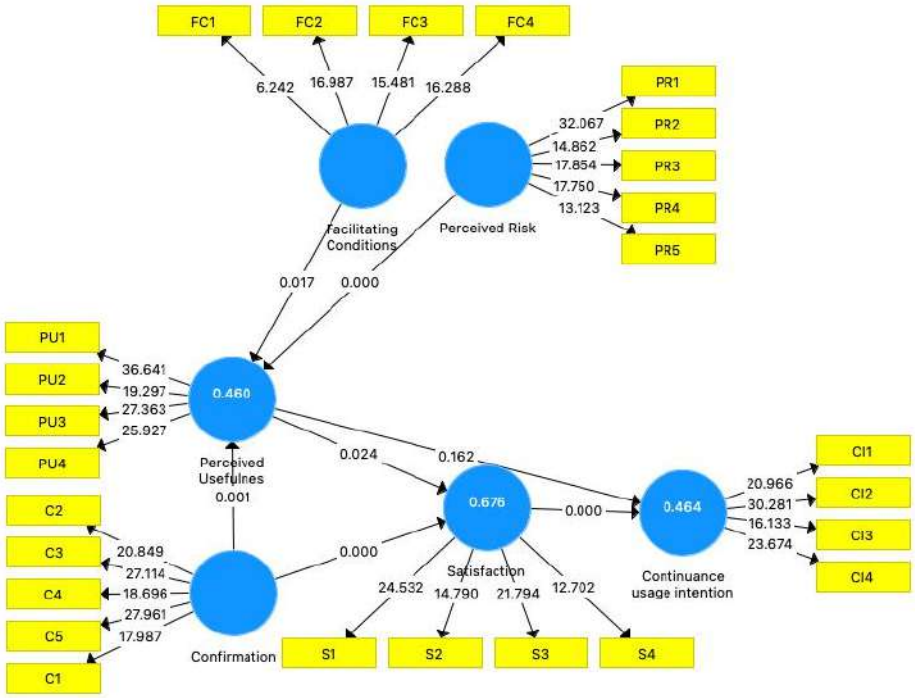

Figure 2: Result of Structural Equation Model Measurement
Source: *Data Prepared (2026)*

Collinearity Evaluation of Structural Models

The collinearity guidelines is *VIF* < 3 (Hair et al., 2021). The reults exhibits all *VIF* values < 3. As a result, collinearity amid predictor entities is not a severe concern of models, and the results report may be examined further.

Evaluation of R^2 Value

The explanatory power of the model for each endogenous construct is assessed through the coefficient of determination (R^2), with reference to the established guidelines (0.75: substantial; 0.50: moderate; and 0.25: weak) (Hair et al., 2021). The PLS algorithm results indicate that the R^2 for Continuous Usage Intention is 0.464, falling within the moderate criteria. This signifies that 46.4% of the variance in users' intention to continue using the system is explained by its antecedent variables within the model, leaving the remaining variance to be accounted for by external factors not included in this study.

Furthermore, the R^2 value for Perceived Usefulness is 0.460, also reflecting moderate predictive relevance. This demonstrates that 46% of the variation in users' perception of usefulness is influenced by the independent variables in the model. In contrast, the Satisfaction construct exhibits the highest R^2 value among the endogenous variables at 0.676, which approaches the substantial criteria. This indicates that 67.6% of the variance in merchant satisfaction is explained by the research model's predictors. Consequently, it can be concluded that the model demonstrates a robust overall explanatory capacity for the endogenous variables, thereby establishing its suitability for proceeding with further hypothesis testing.

Evaluation of Effect Size (f^2)

The effect size (f^2) of each independent variable on the dependent variables varies, ranging from small to large categories. The f^2 value assesses the contribution of each independent latent variable in explaining the dependent variable (Cohen, 1988; Hair

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

et al., 2017). For the dependent variable Perceived Usefulness, the f^2 values for Confirmation and Perceived Risk are 0.086 and 0.096, respectively, indicating a slight effect size. For the dependent variable Satisfaction, Confirmation exhibits a f^2 of 1.388 (great), while Perceived Usefulness shows a f^2 of 0.032 (slight). Regarding Continuance Intention, Perceived Usefulness presents a f^2 of 0.012 (slight), whereas Satisfaction demonstrates a f^2 of 0.579 (great). The PLS bootstrap results confirm these varying magnitudes of predictive relevance across the model's relationships.

Evaluation of Predictive Relevance Value (Q^2)

PLS results exhibit that Q^2 of the three endogenous latent variables is 0.201; 0.209; 0.258 > 0.000. These findings applicability to endogenous latent parameters (Hair et al., 2020).

Evaluation Hypothesis Testing (T-test)

This study used a significance level of 5%. It means that the p-value < 0.05 in sequence for the association is significance (Hair et al., 2017). The results of hypothesis testing are showed in Table 1.

Table 1. Path Coefficients

Association	ß	T-value	p-value	(p<0,05)
Confirmation->Satisfaction (H1)	0.761	20.654	0.000	No
Confirmation->PU (H2)	0.242	3.244	0.001	Yes
Satisfaction->CUI (H3)	0.633	9.728	0.000	Yes
FC->PU (H4)	0.204	2.398	0.017	Yes
PR->PU (H5)	0.363	4.217	0.000	Yes
PU->Satisfaction (H6)	0.116	2.258	0.024	Yes
PU->CUI (H7)	0.091	1.401	0.162	No

Source: Data Prepared (2026)

The statistical evidence substantiates the hypotheses proposing that Confirmation positively influences Perceived Usefulness *(H2)*, Satisfaction drives Continuance Intention *(H3)*, Facilitating Conditions affect Perceived Usefulness *(H4)*, Perceived Risk impacts Perceived Usefulness *(H5)* , and Perceived Usefulness determines Satisfaction *(H6)*. Conversely, the direct path from Perceived Usefulness to Continuance Intention fails to achieve statistical significance *(H7)* ,thereby leading to the rejection of that hypothesis. Notably, while the relationship between Confirmation and Satisfaction exhibits a remarkably strong and significant coefficient, this particular hypothesis is formally designated as rejected in the present summary *(H1)*, indicating a potential incongruence between the empirical effect size and the theoretical directional assumption.

The Mediation Analysis

The mediating analysis is used for assessing hypotheses through mediation construct: H8 and H9. A single mediation is obtained from the indirect effect's size or specific indirect effect in bootstrapping results in PLS-SEM divided by the total effect (i.e., specific indirect effect + direct effect (Hair et al., 2022)

The single mediation analysis focuses on the significance of the direct effects of PU on CUI and Confirmation on Satisfaction . The relationship from PU to CUI (direct effect) is weak (0.162) and statistically nonsignificant and PU to CUI via Satisfaction (indirect effects) is strong (0.02) and statistically significant . The relationship from Confirmation to Satisfaction (direct effect) is strong (0.002) and statistically nonsignificant and Confirmation to Satisfaction via PU (indirect effects) is weak (0.458) and statistically not significant. Following the mediation analysis, the conclusion is that PU fully mediates the Confirmation to Satisfaction relationship. As well Satisfaction doestn mediates the PU to CUI.

DISCUSSION

This study investigated the antecedents of perceived usefulness in the continuance usage intention of QRIS merchant services in Solo City, drawing upon the Expectation Confirmation Model (ECM) and extending it with facilitating conditions and perceived risk. The study employed a quantitative approach with a survey and cross-sectional design, gathering data from 201 merchants using QRIS in Solo City and analyzing it using SMART PLS.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

The findings reveal that confirmation significantly impacts perceived usefulness but does not directly affect satisfaction among QRIS merchants. This indicates that satisfaction is not solely determined by the fulfillment of initial expectations but is more strongly influenced by other factors such as usage experience, service quality, or perceived benefits. Within the ECM framework, confirmation serves as a key determinant of satisfaction (Bhattacherjee, 2001); however, in the QRIS merchant context, merchants may have developed baseline expectations considered standard requirements rather than exceptional experiences. When the system meets these minimum expectations, it may not generate sufficient positive disconfirmation to significantly enhance satisfaction levels. This finding aligns with studies by (Daneji et al., 2019) which found that not all ECM constructs consistently influence satisfaction across different contexts.

The significant influence of confirmation on perceived usefulness demonstrates that when merchants experience alignment between their initial expectations and actual system performance, their perception of QRIS usefulness increases. This mechanism is particularly relevant in the QRIS context, where merchants evaluate the system's utility based on tangible outcomes such as transaction efficiency, customer convenience, and operational improvements. This finding is consistent with previous empirical studies Daneji et al., (2019) reinforcing the theoretical proposition that confirmation serves as a cognitive anchor for evaluating system benefits.

The results further demonstrate that satisfaction significantly affects continuance usage intention, confirming its central role in determining post-adoption behavioral intentions. According to the ECM (Bhattacherjee, 2001), satisfaction represents the affective evaluation of the overall user experience. In the QRIS context, when merchants experience satisfaction derived from positive transaction experiences, operational efficiency, and customer convenience, they develop stronger commitment to maintain the service usage. This finding aligns with previous studies in digital payment contexts , suggesting that satisfaction serves as a universal driver of behavioral loyalty in post-adoption stages.

However, the results reveal that perceived usefulness does not significantly affect continuance usage intention. This suggests that while merchants perceive QRIS as useful, this perception alone does not directly translate into continuance intention. This finding can be explained through the ECM framework, which posits that continuance intention is primarily driven by satisfaction rather than perceived usefulness .Perceived usefulness may represent a baseline expectation considered a prerequisite for usage rather than a differentiating factor for continuance decisions. This aligns with previous studies suggesting that the direct effect of perceived usefulness on continuance intention may be attenuated in post-adoption stages (Catherine & Tjokrosaputro, 2023; Daneji et al., 2019).

The findings confirm that facilitating conditions significantly affect perceived usefulness among QRIS merchants. When merchants possess adequate devices, internet connectivity, knowledge, and support systems, they are better able to experience and recognize the benefits of the service. This is consistent with previous research demonstrating the importance of facilitating conditions in shaping user perceptions (Sharma & Sharma, 2019; Sukendro et al., 2020). Similarly, perceived risk significantly affects perceived usefulness, as when merchants perceive higher levels of risk—such as security concerns, privacy issues, or potential losses—their assessment of QRIS usefulness decreases. This aligns with previous studies demonstrating the negative relationship between perceived risk and perceived usefulness (Dionisia & Elaine, 2023; Kumara & Laksmidewi, 2024), reinforcing that risk perceptions serve as cognitive barriers diminishing users' evaluation of technology benefits.

The mediating analysis reveals that perceived usefulness serves as a significant mediator in the confirmation-satisfaction relationship. This indicates that the effect of confirmation on satisfaction operates through the cognitive pathway of perceived usefulness. Within the ECM framework, perceived usefulness serves as a crucial cognitive mechanism translating confirmation experiences into affective satisfaction (Bhattacherjee, 2001). When merchants experience confirmation, they develop stronger perceptions of QRIS usefulness, which subsequently enhances satisfaction. This is consistent with prior studies demonstrating the mediating role of perceived usefulness (Puri & Utami, 2026; Sajili & Wiadi, 2025). However, satisfaction does not significantly mediate the perceived usefulness-continuance intention relationship, suggesting that the effect of perceived usefulness on continuance intention operates through alternative pathways. In the QRIS context, merchants may develop continuance intentions based on utilitarian considerations rather than affective evaluations, aligning with studies suggesting that satisfaction does not always mediate this relationship (Tam et al., 2020).

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

CONCLUSION

This study investigated the antecedents of perceived usefulness in the continuance usage intention of QRIS merchant services in Solo City, drawing upon the Expectation Confirmation Model and extending it with facilitating conditions and perceived risk. The findings provide empirical evidence that confirmation significantly impacts perceived usefulness but does not directly affect satisfaction, indicating that the influence of confirmation on satisfaction operates through the mediating mechanism of perceived usefulness. Satisfaction emerges as the primary driver of continuance usage intention, confirming its central role in post-adoption behavior. Facilitating conditions significantly enhance perceived usefulness, while perceived risk diminishes it. Perceived usefulness significantly influences satisfaction but does not directly affect continuance usage intention. The mediating analysis reveals that perceived usefulness fully mediates the confirmation-satisfaction relationship, while satisfaction does not mediate the perceived usefulness-continuance intention relationship.

This study supports the emergence of theories by confirming the relationships drawn from the Expectation Confirmation Model in the context of QRIS merchant services. The novelty of this study lies in the introduction of facilitating conditions and perceived risk as antecedents of perceived usefulness. First, this study extends the ECM by demonstrating that perceived usefulness serves as a full mediator between confirmation and satisfaction, refining the understanding of how confirmation influences satisfaction through the cognitive evaluation of benefits. Second, the study contributes to technology acceptance literature by examining the role of external factors in shaping perceived usefulness, demonstrating that organizational and technical support enhances perceived usefulness while risk perceptions diminish it. Third, the study challenges the direct relationship between perceived usefulness and continuance usage intention in post-adoption contexts, suggesting that satisfaction serves as a necessary condition for translating perceived usefulness into continuance intention.

The findings provide valuable practical implications for QRIS service providers, policymakers, and merchants. The significant influence of facilitating conditions underscores the importance of infrastructure and support systems; service providers should ensure adequate access to devices, internet connectivity, and technical support through training programs and clear guidance. The negative influence of perceived risk highlights the need for risk mitigation strategies, including enhanced transaction security, privacy protection, and transparent communication. The critical role of satisfaction in driving continuance intention suggests that providers should focus on service quality, user experience, and value delivery. Furthermore, the nonsignificant direct effect of perceived usefulness on continuance intention indicates that providers should convert perceived usefulness into satisfaction through positive user experiences and value-added features that exceed baseline expectations.

Several limitations should be acknowledged. The cross-sectional design limits the ability to establish causal relationships; future research could employ longitudinal designs to examine how the relationships evolve over time. The focus on Solo City may limit generalizability; future research could expand geographical scope to multiple cities or regions. The limited set of variables could be extended with trust, perceived ease of use, habit, or social influence to provide more comprehensive understanding. The quantitative methods may be subject to common method bias; mixed methods approaches could provide deeper insights into merchant experiences and perceptions. Finally, future research could investigate moderating effects of merchant characteristics such as business type, business size, or usage duration.

In conclusion, this study provides much-needed insight into how merchants perceive QRIS services in terms of perceived usefulness and satisfaction, together with continuance usage intention in this era where the uncertainty of technological and economic conditions changes rapidly. The findings confirm the substantial role of confirmation, facilitating conditions, and perceived risk in shaping perceived usefulness, which subsequently influences satisfaction and continuance usage intention. These insights contribute to both theoretical development and practical strategies for enhancing QRIS adoption and sustained usage among merchants.

REFERENCES

1. Akdim, K., Casaló, L. V., & Flavián, C. (2022). The role of utilitarian and hedonic aspects in the continuance intention to use social mobile apps. *Journal of Retailing and Consumer Services*, *66*, 102888. https://doi.org/10.1016/j.jretconser.2021.102888
2. Akram, U., Junaid, M., Zafar, A. U., Li, Z., & Fan, M. (2021). *Online purchase intention in Chinese social commerce platforms: Being emotional or rational?*

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

3. Alruwaie, M., El-Haddadeh, R., & Weerakkody, V. (2020). Citizens' continuous use of eGovernment services: The role of self-efficacy, outcome expectations and satisfaction. *Government Information Quarterly*, *37*, 101485. https://doi.org/10.1016/j.giq.2020.101485
4. Andina Dwijayant, Salma Anhalsali, Elia Daryati Rahayu, Zen Munawar, Rita Komalasari, Puji Pramesti, & Poniah Juliawati. (2022). Manfaat Quick Response Code Indonesian Standard (QRIS) pada Nasabah di Bank Jabar Banten (BJB). *ATRABIS: Jurnal Administrasi Bisnis (e-Journal)*, *8*(2), 256–264. https://doi.org/10.38204/atrabis.v8i2.1155
5. Ashaduzzaman, M., Jebarajakirthy, C., Scott, W., Maseeh, H., Das, M., & Pentecost, R. (2022). Predicting Collaborative Consumption Behavior: A Meta-Analytic path analysis of the theory of planned behaviour. *European Journal of Marketing*, Forthcoming. https://doi.org/10.1108/EJM-07-2020-0563
6. Badiang, A., & Nkwei, E. (2024). Drivers and Impact of Intention to Adopt Online Purchases: The Moderating Effects of Cultural Values. *International Business Research*, *17*, 69–69. https://doi.org/10.5539/ibr.v17n3p69
7. Bank Indonesia. (2019). Quick Response Code Indonesian Standard (QRIS). Retrieved from https://www.bi.go.id/id/fungsi-utama/sistem-pembayaran/ritel/kanal-layanan/qris/default.aspx
8. Barata, M. L., & Coelho, P. S. (2021). Music streaming services: Understanding the drivers of customer purchase and intention to recommend. *Heliyon*, *7*(8), e07783. https://doi.org/10.1016/j.heliyon.2021.e07783
9. Bhattacherjee, A. (2001). Understanding Information Systems Continuance: An Expectation-Confirmation Model. *MIS Quarterly*, *25*, 351–370. https://doi.org/10.2307/3250921
10. Bhukya, R., & Singh, S. (2015). The effect of perceived risk dimensions on purchase intention. *American Journal of Business*, *30*, 218–230. https://doi.org/10.1108/AJB-10-2014-0055
11. Catherine, C., & Tjokrosaputro, M. (2023). Pengaruh Perceived Usefulness dan Confirmation terhadap Continuance Intention Pembelian Tiket Maskapai LCC: Dengan Satisfaction sebagai Mediator. *Jurnal Manajerial Dan Kewirausahaan*, *5*(2), 383–391. https://doi.org/10.24912/jmk.v5i2.23408
12. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed). Hillsdale, N.J: L. Erlbaum Associates.
13. Cohen, L., Manion, L., & Morrison, keith. (2018). *Research Methods in Education* (Eighth edition). New York: Routledge.
14. Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Fifth Edition). California: SAGE Publications, Inc.
15. Daneji, A. A., Ayub, A. F. M., & Khambari, M. N. Md. (2019). The effects of perceived usefulness, confirmation and satisfaction on continuance intention in using massive open online course (MOOC). *Knowledge Management & E-Learning: An International Journal*, 201–214. https://doi.org/10.34105/j.kmel.2019.11.010
16. Daragmeh, A., Sági, J., & Zoltan, Z. (2021). Continuous Intention to Use E-Wallet in the Context of the COVID-19 Pandemic: Integrating the Health Belief Model (HBM) and Technology Continuous Theory (TCT). *Journal of Open Innovation: Technology, Market, and Complexity*, *7*, 132. https://doi.org/10.3390/joitmc7020132
17. Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319. https://doi.org/10.2307/249008
18. Dionisia, & Elaine. (2023). *Pengaruh Perceived Risk, Trust, Perceived Usefulness, dan Ease of Use terhadap E-payment Adoption Aplikasi DANA*.
19. Gao, L., & Bai, X. (2014). A unified perspective on the factors influencing consumer acceptance of internet of things technology. *Asia Pacific Journal of Marketing and Logistics*, *26*, 211–231. https://doi.org/10.1108/APJML-06-2013-0061
20. Hafidhuddin, M. A. & Nurul Azizah. (2023). The Influence of Perceived Usefulness, Perceived Ease of Use, and Service Quality on Continuance Intention with Satisfaction as an Intervening Variable (Study of Indrive Application Users in Surabaya). *International Journal of Economics (IJEC)*, *2*(2), 794–803. https://doi.org/10.55299/ijec.v2i2.717
21. Hair, Joe F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, *109*, 101–110. https://doi.org/10.1016/j.jbusres.2019.11.069
22. Hair, Joseph F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (Eighth edition). Andover, Hampshire: Cengage.
23. Hair, Joseph F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (Eds). (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (Second edition). Los Angeles: Sage.

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

24. Hair, Joseph F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd edn). SAGE Publications, Inc. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/1743727X.2015.1005806
25. Hair, Joseph F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-80519-7
26. Hasna, F. N., & Trifiyanto, K. (2023). Pengaruh Perceived Usefulness, Perceived Security, dan Confirmation Terhadap Kepuasan Pengguna Fintech E-wallet DANA: Studi pada Pengguna E-wallet DANA Kabupaten Kebumen. *Jurnal Ilmiah Mahasiswa Manajemen, Bisnis dan Akuntansi (JIMMBA)*, *5*(5), 565–576. https://doi.org/10.32639/jimmba.v5i5.460
27. Herawati, M., & Mukhsin, M. (2023). *Pengaruh Perceived Of Usefulness, Perceived Ease Of Use, Dan Perceived Risk Terhadap Continuance Intention Pada Penggunaan Digital Payment*. *13*.
28. Karahanna, E., Straub, D., & Chervany, N. (1999). Information Technology Adoption Across Time: A Cross-Sectional Comparison of Pre-Adoption and Post-Adoption Beliefs. *MIS Quarterly*, *23*, 183–213. https://doi.org/10.2307/249751
29. Khalil, A.-A., Widjaja, M., Hidayanto, A., & Prabowo, H. (2020). *Identification of Factor Affecting Continuance Usage Intention of mHealth Application: A Systematic Literature Review* (p. 6). https://doi.org/10.1109/ICICoS51170.2020.9299038
30. Koo, C., Wati, Y., Park, K., & Lim, M. K. (2011). Website Quality, Expectation, Confirmation, and End User Satisfaction: The Knowledge-Intensive Website of the Korean National Cancer Information Center. *J Med Internet Res*, *13*(4), e81. https://doi.org/10.2196/jmir.1574
31. Kumara, K., & Laksmidewi, D. (2024). *The Effect Of Perceived Risk On Intention To Use Of E-Wallet In Jabodetabek With The Mediation Of Perceived Usefulness And Perceived Ease Of Use*.
32. Lee, J.-C., Tang, Y., & Jiang, S. (2023). Understanding continuance intention of artificial intelligence (AI)-enabled mobile banking applications: An extension of AI characteristics to an expectation confirmation model. *Humanities and Social Sciences Communications*, *10*. https://doi.org/10.1057/s41599-023-01845-1
33. Liao, C., Palvia, P., & Chen, J.-L. (2009). Information technology adoption behavior life cycle: Toward a Technology Continuance Theory (TCT). *International Journal of Information Management*, *29*(4), 309–320. https://doi.org/10.1016/j.ijinfomgt.2009.03.004
34. Maryanto, R., & Kaihatu, T. (2021). Customer Loyalty as an Impact of Perceived Usefulness to Grab Users, Mediated by Customer Satisfaction and Moderated by Perceived Ease of Use. *Binus Business Review*, *12*, 31–39. https://doi.org/10.21512/bbr.v12i1.6293
35. Mukminin, A., Habibi, A., Muhaimin, M., & Hidayat, M. (2023). Social media use for English writing (SMU-EW): Preservice English teachers. *Ampersand*, *10*, 100112. https://doi.org/10.1016/j.amper.2023.100112
36. Nawawi, M. T., & Puspitowati, I. (2017). Pengaruh Kualitas Pelayanan Dan Fasilitas Perpustakaan Sebagai Prediktor Terhadap Kepuasan Civitas Akademika Fakultas Ekonomi Universitas Tarumanagara Di Jakarta. *Jurnal Ekonomi*, *20*(2). https://doi.org/10.24912/je.v20i2.163
37. Oghuma, A., Libaque-Saenz, C., Wong, S. F., & Chang, L. Y. (2015). An Expectation-Confirmation Model of Continuance Intention to Use Mobile Instant Messaging. *Telematics and Informatics*, *33*, 34–47. https://doi.org/10.1016/j.tele.2015.05.006
38. Pathak, V., & Pathak, A. (2017). Understanding Perceived Risk: A Case Study of Green Electronic Consumer Products. *Management Insight - The Journal of Incisive Analysers*, *13*. https://doi.org/10.21844/mijia.v13i01.8367
39. Pujianto, H., & Marwati, F. S. (2024). Consumer Shopping Behavior In Indonesia And Thailand: Hedonic And Utilitarian Shopping Values. *Jurnal Ekonomi Dan Bisnis Airlangga*, *34*(1), 128–147. https://doi.org/10.20473/jeba.V34I12024.128-147
40. Puri, F. N. A., & Utami, D. E. (2026). Exploring QRIS Continuance Use Intention Among Generation Z: Integrating TAM and ECM with Trust and Perceived Risk as Moderators. *Journal of Enterprise and Development*, *8*(1), 115–130. https://doi.org/10.20414/jed.v8i1.15005
41. Rahi, S., Ghani, M., & Ngah, A. (2019). Integration of unified theory of acceptance and use of technology in internet banking adoption setting: Evidence from Pakistan. *Technology in Society*, *58*. https://doi.org/10.1016/j.techsoc.2019.03.003

International Journal of Current Science Research and Review
ISSN: 2581-8341
Volume 09 Issue 07 July 2026
DOI: 10.47191/ijcsrr/V9-i7-04, Impact Factor: 8.048
IJCSRR @ 2026
www.ijcsrr.org

42. Rainner, P. (2024). Nominal Transaksi QRIS Makin Meningkat, Tembus Rp42 T! [Https://goodstats.id/article/nominal-transaksi-qris-makin-meningkat-kali-ini-capai-rekor-nGJLY]. Retrieved from https://goodstats.id/article/nominal-transaksi-qris-makin-meningkat-kali-ini-capai-rekor-nGJLY
43. Sajili, M., & Wiadi, I. (2025). *Analisis Perceived Usefulness, Perceived Ease Of Use, Dan Perceived Risk Terhadap Minat Pembayaran Quick Response Code Indonesian Standard (QRIS)*.
44. Salim, M., Alfansi, L., Anggarawati, S., Saputra, F. E., & Afandy, C. (2021). The role of perceived usefulness in moderating the relationship between the DeLone and McLean model and user satisfaction. *Uncertain Supply Chain Management*, *9*(3), 755–766. https://doi.org/10.5267/j.uscm.2021.4.002
45. Sharma, S. K., & Sharma, M. (2019). Examining the role of trust and quality dimensions in the actual usage of mobile banking services: An empirical investigation. *International Journal of Information Management*, *44*, 65–75. https://doi.org/10.1016/j.ijinfomgt.2018.09.013
46. Shiau, W.-L., Yuan, Y., Pu, X., Ray, S., & Chen, C. C. (2020). Understanding fintech continuance: Perspectives from self-efficacy and ECT-IS theories. *Industrial Management & Data Systems*, *120*(9), 1659–1689. https://doi.org/10.1108/IMDS-02-2020-0069
47. Sreejesh, S., Mohapatra, S., & Anusree, M. R. (2014). *Business Research Methods*. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-00539-3
48. Sukendro, S., Habibi, A., Khaeruddin, K., Indrayana, B., Syahruddin, S., Makadada, F. A., & Hakim, H. (2020). Using an extended Technology Acceptance Model to understand students' use of e-learning during Covid-19: Indonesian sport science education context. *Heliyon*, *6*(11). https://doi.org/10.1016/j.heliyon.2020.e05410
49. Susanto, A., Chang, Y., & Ha, Y. (2016). Determinants of continuance intention to use the smartphone banking services: An extension to the expectation-confirmation model. *Industrial Management & Data Systems*, *116*(3), 508–525. https://doi.org/10.1108/IMDS-05-2015-0195
50. Tam, C., Santos, D., & Oliveira, T. (2020). Exploring the influential factors of continuance intention to use mobile Apps: Extending the expectation confirmation model. *Information Systems Frontiers*, *22*(1), 243–257. https://doi.org/10.1007/s10796-018-9864-5
51. Uddin, Md. K., & Nasrin, S. (2023). Customer Satisfaction and Intention to Use Mobile Financial Services: A Systematic Literature Review. *European Journal of Business and Management Research*, *8*(1), 274–283. https://doi.org/10.24018/ejbmr.2023.8.1.1815
52. Vaezi, R., Mills, A., Chin, W., & Zafar, H. (2016). User Satisfaction Research in Information Systems: Historical Roots and Approaches. *Communications of the Association for Information Systems*, *38*, 501–532. https://doi.org/10.17705/1CAIS.03827
53. Venkatesh, Morris, Davis, & Davis. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, *27*(3), 425. https://doi.org/10.2307/30036540
54. Wang, M.-M., & Wang, J.-J. (2019). Understanding Solvers' Continuance Intention in Crowdsourcing Contest Platform: An Extension of Expectation-Confirmation Model. *Journal of Theoretical and Applied Electronic Commerce Research*, *14*(3), 17–33. https://doi.org/10.4067/S0718-18762019000300103
55. Wang, Y.-T., & Lin, K.-Y. (2021). Understanding Continuance Usage of Mobile Learning Applications: The Moderating Role of Habit. *Frontiers in Psychology*, *12*, 736051. https://doi.org/10.3389/fpsyg.2021.736051
56. Wen, J. (2024). The Impact of Digital Payments on the Financial Services Industry. *Advances in Economics, Management and Political Sciences*, *86*(1), 76–80. https://doi.org/10.54254/2754-1169/86/20240946
57. Yasirandi, R., & Thanasopon, B. (2025). Understanding Continuance Intention of Merchants as End User in Online Food Delivery After COVID-19. *HighTech and Innovation Journal*, *6*(1), 165–182. https://doi.org/10.28991/HIJ-2025-06-01-012

Cite this Article: Nurhidayah, I., Suryandari, R.T. (2026). Antecedents of Perceived Usefulness in the Continuance Usage Intention of QRIS Merchant Services: An Empirical Study of Users in Solo City, Indonesia. International Journal of Current Science Research and Review, 9(7), pp. 3648-3657. DOI: https://doi.org/10.47191/ijcsrr/V9-i7-04