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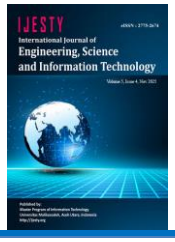

UX Matters: Unlocking QRIS Adoption among MSMEs in the Greater Jakarta Area

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Abstract

This study investigates the influence of User Experience (UX) dimensions, integrated with the Technology Acceptance Model (TAM), on the adoption intention of Micro, Small, and Medium Enterprises (MSMEs) in the Greater Jakarta area toward the Quick Response Code Indonesian Standard (QRIS). The research examines functional qualities, which consist of Efficiency, Perspicuity, and Dependability, alongside hedonic qualities, represented by Stimulation and Novelty, as well as Trust, which serves as an essential construct in the adoption process of financial technologies. These factors were evaluated as direct predictors of adoption behaviour, while Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) were employed as mediating variables to capture the mechanisms underlying the relationships, consistent with TAM's theoretical framework. Data were collected from 400 MSMEs across various industries in the region, and analysis was conducted using Partial Least Squares–Structural Equation Modelling (PLS-SEM). The empirical results demonstrate that Efficiency strongly drives PU, emphasising the critical role of task performance and functional reliability in shaping perceptions of usefulness. Dependability and Trust significantly improve PEOU, highlighting that stable system performance and confidence in technology providers reduce complexity and foster ease of use. Interestingly, while Stimulation shows a positive and direct impact on Intention to Use, Perspicuity and Novelty yield unexpected negative effects, suggesting that overly simple or overly unfamiliar experiences may hinder rather than encourage adoption. Furthermore, PU and PEOU are shown to mediate several causal paths, reinforcing TAM's theoretical assumptions and underscoring the value of integrating UX considerations into classical acceptance models. The final structural model exhibits strong explanatory power, with an R^2 of 0.903 for Intention to Use, indicating the robustness of the integrated framework and confirming the effectiveness of combining UX dimensions with TAM in explaining QRIS adoption behaviour among MSMEs.

Keywords: *Digital Payments, Greater Jakarta, MSMEs, QRIS Adoption, Technology Acceptance Model.*

1. Introduction

In recent years, Indonesia has experienced significant growth in digital transactions, a trend further accelerated by the COVID-19 pandemic as individuals and businesses sought safer, contactless, and more efficient payment solutions. To address this shift, Bank Indonesia introduced the Quick Response Code Indonesian Standard (QRIS) in 2019, aiming to unify multiple e-wallet providers under a single QR code framework. This initiative was intended to facilitate digital payments, particularly for Micro, Small, and Medium Enterprises (MSMEs), by enabling interoperability across payment platforms [1]. Despite these advantages, QRIS adoption among MSMEs remains below expectations.

User Experience (UX) has emerged as a crucial factor influencing QRIS adoption. Common issues such as a complex registration process, unintuitive interfaces, and inadequate user support hinder MSMEs from fully utilising the system's potential [2]. MSMEs often encounter navigation difficulties that result in frustration, reduced satisfaction, and in some cases, abandonment of the service altogether [3].

In addition to UX challenges, trust and security concerns significantly affect adoption decisions. MSMEs perceive risks associated with fraud, data breaches, and transaction integrity when using new digital payment systems [4]. These perceptions reinforce the necessity for secure system design and reliable service delivery, as security assurances directly influence user confidence and willingness to adopt [5]. Without resolving these concerns, adoption rates are unlikely to improve.

Several studies have highlighted the interplay between UX and the adoption of digital payment systems. For instance, the ease of use and perceived security of a platform are consistently found to be decisive in adoption behaviour [6]. Streamlined onboarding, simplified user interfaces, and strengthened security protocols are essential for overcoming barriers to adoption. These improvements not only boost confidence among existing users but also encourage uptake across a wider range of industries [7].

Another challenge lies in the varying levels of digital literacy among MSMEs. Many business owners lack the technical proficiency required to navigate digital payment tools effectively [8]. Combined with poorly optimised user interfaces, this gap in digital literacy reduces the likelihood of sustained engagement with QRIS. Addressing this issue demands targeted educational initiatives and user support programs, coupled with an intuitive UX design [9].

In summary, UX plays a pivotal role in determining the success of QRIS adoption among MSMEs. A strategic approach integrating user-centred design, robust security measures, and tailored digital literacy programs could substantially improve adoption rates. Such measures would align with Indonesia's broader financial inclusion agenda while accelerating the transition towards a cashless economy [10].

2. Literature Review

2.1. User Experience (UX) and Its Dimensions in Digital Payments

User Experience (UX) refers to the holistic perception and response of users when interacting with a product or service, encompassing both functional and emotional aspects [11]. In digital payment contexts, UX goes beyond system efficiency; it includes usability, trustworthiness, and even the sense of novelty. The User Experience Questionnaire (UEQ), developed by Laugwitz et al., is a validated framework to measure UX across six core dimensions: Attractiveness, Efficiency, Perspicuity, Dependability, Stimulation, and Novelty [12].

In QRIS adoption, dimensions such as Efficiency, Perspicuity, and Dependability directly influence perceived ease of use, while Stimulation and Novelty play motivational roles in encouraging sustained engagement [13]. Positive UX has been linked to higher satisfaction and retention rates in payment systems [14]. Conversely, poorly designed interfaces and inconsistent performance can deter adoption even when the functional benefits are clear [15].

2.2. Technology Acceptance Model (TAM) in MSME Context

The Technology Acceptance Model (TAM) posits that Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) are the primary predictors of a user's intention to adopt a technology [16]. While TAM has been widely applied in various contexts, its integration with experiential factors like UX has gained traction in recent years [9]. In MSMEs, adoption decisions are often shaped not only by operational efficiency but also by the emotional comfort and trust that the system instils [6].

Studies in Indonesia have demonstrated that product knowledge, perceived benefits, and system simplicity are crucial for QRIS adoption [6]. However, traditional TAM overlooks affective dimensions such as excitement, enjoyment, or perceived modernity of the system, which can be decisive in emerging market contexts [17]. Integrating UX metrics into TAM helps address this gap, offering a more comprehensive framework for predicting adoption intentions [9].

2.3. Trust and Security in Digital Payment Systems

Trust plays a pivotal role in financial technology adoption, particularly in environments where digital literacy varies widely [18]. For MSMEs, the perceived security of transactions—encompassing fraud prevention, privacy protection, and system reliability—is often a non-negotiable prerequisite for adoption [5].

Research on Indonesian MSMEs shows that trust has a significant positive correlation with both perceived ease of use and adoption intention [4,7]. When users believe that the system is dependable, their cognitive load in using it decreases, leading to more favourable adoption decisions [19]. Therefore, UX design must incorporate features that visibly reinforce security, such as transaction confirmations, encryption indicators, and responsive customer support [20].

2.4. Digital Literacy and Adoption Barriers

Digital literacy refers to the ability to effectively use digital tools and technologies for specific purposes [8]. In MSMEs, digital literacy impacts not only the adoption decision but also the depth of system utilisation. Low literacy levels can lead to underutilization or even abandonment of digital payment systems despite their availability [21].

Barriers such as language complexity, unclear instructions, and lack of training resources are often cited as deterrents [22]. Addressing these requires simplifying interfaces, offering multilingual support, and providing hands-on training tailored to the MSME context [23].

2.5. UX into Adoption Models for Emerging Economies

In emerging economies, integrating UX into existing adoption models like TAM offers a robust lens for understanding user behaviour. The hedonic aspects of UX, such as Stimulation and Novelty, have been shown to enhance engagement by making system use enjoyable [9,12]. This is particularly relevant for younger MSME owners, who may value innovation and design aesthetics as much as functionality [2,3].

The combination of cognitive (ease of use, usefulness) and affective (enjoyment, excitement) drivers is essential for holistic adoption strategies [24]. In the case of QRIS, balancing these factors can contribute to broader adoption, deeper engagement, and longer-term retention among MSMEs.

3. Methods

This study adopts the User Experience–Technology Acceptance Model (UX-TAM) as the main theoretical framework. The Technology Acceptance Model (TAM) has been widely applied to explain and predict technology adoption behaviour through two key constructs, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) [16,25]. Although widely validated, TAM has been criticized for insufficiently accounting for experiential and emotional aspects that often determine user acceptance [27]. To address this gap, the present research incorporates dimensions from the User Experience Questionnaire (UEQ) [12,26] into the TAM structure. The UEQ measures six dimensions of user experience: Efficiency, Perspicuity, Dependability, Stimulation, Novelty, and Attractiveness. In this study, Attractiveness was excluded to avoid conceptual redundancy with PU and PEOU, leaving five dimensions to represent both functional qualities (Efficiency, Perspicuity, Dependability) and hedonic qualities (Stimulation, Novelty). Trust is also included as an

independent variable due to its strong influence on financial technology adoption [4,5,18]. In QRIS adoption, MSMEs must be confident in the reliability, security, and credibility of the payment system. Trust is expected to positively influence PEOU, as a reliable and secure system reduces user anxiety and perceived operational complexity [19,20]. The conceptual framework positions Efficiency as a predictor of PU, while Perspicuity and Dependability are expected to influence PEOU. Stimulation and Novelty are hypothesised to directly impact Intention to Use, reflecting the role of emotional engagement in driving adoption [9,24]. PU and PEOU function as mediating variables, consistent with TAM's structure, while Intention to Use QRIS is the dependent variable.

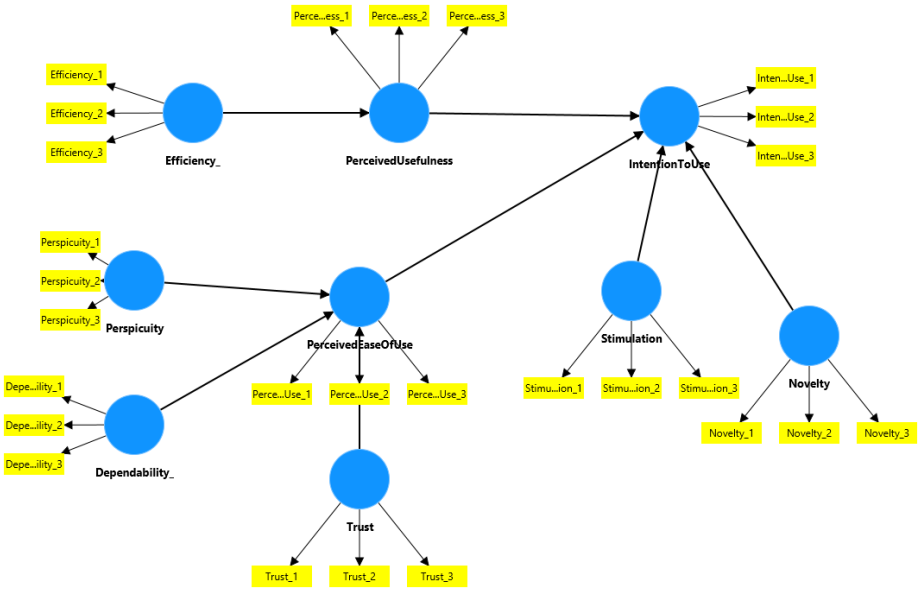

Fig 1. Proposed Research Model

The proposed research model integrates the User Experience dimensions and Trust into the Technology Acceptance Model to examine their effects on Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Intention to Use QRIS. Each latent variable in the model is measured using multiple observed indicators to ensure construct validity and reliability.

For the User Experience dimensions, Efficiency, Perspicuity, Dependability, Stimulation, and Novelty are each measured through three reflective items adopted from the User Experience Questionnaire (UEQ), which capture different aspects of the construct while maintaining internal consistency. For example, Dependability indicators reflect the system's perceived consistency, predictability, and freedom from errors, while Perspicuity items assess clarity, comprehensibility, and ease of learning. Hedonic quality dimensions, such as Stimulation and Novelty, are also represented by three items each, capturing the emotional and innovative appeal of the system.

Trust is similarly measured by three items evaluating perceptions of system reliability, security, and credibility in the context of QRIS. The core TAM constructs, PEOU and PU, follow the same approach, with three items each adapted from prior validated TAM studies. The dependent variable, Intention to Use, is also measured by three indicators, ensuring adequate coverage of behavioural intention toward QRIS adoption. This multi-item measurement approach increases the robustness of the model by reducing measurement error and capturing the construct comprehensively.

Based on the integrated UX-TAM model, seven hypotheses are proposed.

1. Efficiency is expected to positively influence PU by improving the speed and effectiveness with which MSMEs complete transactions.
2. Perspicuity is expected to positively influence PEOU by reducing cognitive effort through intuitive design.
3. Dependability is expected to positively influence PEOU by ensuring consistent system performance and reliability.
4. Stimulation is expected to directly enhance Intention to Use, as enjoyable and engaging systems encourage adoption.
5. Novelty is expected to directly enhance Intention to Use, as innovative features create positive user perceptions.
6. PEOU is expected to positively influence PU, as systems that are easy to operate are often perceived as more beneficial.
7. PU is expected to directly influence Intention to Use, as MSMEs are more inclined to adopt technologies they perceive as valuable.

The population of this study comprises MSMEs operating in the Greater Jakarta area that have been introduced to or have the option to use QRIS for transactions. The sampling technique employed is purposive sampling, targeting business owners or managers with decision-making authority regarding payment methods. A total of 400 valid responses were collected, exceeding the minimum sample size requirement for Partial Least Squares–Structural Equation Modelling (PLS-SEM) analysis, which recommends at least ten times the number of structural paths directed at any construct in the model [28]. Primary data were gathered through an online questionnaire designed to measure each construct using validated items from prior studies [9,12,16,26]. Each item employed a five-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The questionnaire consisted of three sections: demographic information, questions measuring independent and mediating variables, and questions assessing the dependent variable. Before full deployment, the instrument underwent a pilot test to ensure clarity and content validity [29].

Data analysis was conducted using PLS-SEM with the software SmartPLS 4. This method was selected due to its suitability for predictive modelling, flexibility in handling complex models, and effectiveness with relatively small to medium sample sizes [30]. The analysis followed two main stages: evaluation of the measurement model and evaluation of the structural model [31]. The measurement model assessment included testing for indicator reliability, internal consistency reliability (Composite Reliability), convergent validity (Average Variance Extracted), and discriminant validity (Fornell–Larcker criterion and HTMT ratio) [32]. The structural model evaluation involved examining path coefficients, coefficient of determination (R^2), predictive relevance (Q^2), and significance levels

obtained through bootstrapping with 5,000 resamples [33]. This methodological approach ensures that the proposed model is both reliable and valid for explaining the factors influencing QRIS adoption intention among MSMEs in the Greater Jakarta area.

4. Result and Discussion

4.1. Respondent Profile

Data for this study were obtained through collaborations with major principals, namely PT Sinar Sosro, PT Fokus Ritel Indoprima, PT Enseval Putera Megatrading Tbk, and PT Seraya Makmur Indonesia. This collaboration provided direct access to MSMEs at the lowest level of the distribution chain, particularly those operating as sub-distributors. This method ensured the inclusion of small-scale businesses that are embedded within established supply networks and operate at the grassroots level.

A total of 400 MSMEs in the Greater Jakarta Metropolitan Area (Jabodetabek) were surveyed, meeting the sample size requirements outlined in Chapter 3. This sample provides a statistically reliable representation for assessing QRIS adoption. The age distribution shows that 68 per cent of respondents were between 18 and 35 years old, with the largest group comprising 39 per cent aged 26 to 35, followed by 29 per cent aged 18 to 25. Respondents aged 36 to 45 accounted for 25 per cent, while only 9 per cent were above 45 years old. This indicates a strong representation of younger entrepreneurs who are likely to have higher levels of digital literacy.

In terms of education, 51 per cent of respondents had completed high school, 43 per cent held a bachelor's degree, 5 per cent had a master's degree, and 1 per cent had junior high school education. No respondents reported having a doctoral-level education. This suggests that most participants possess at least a secondary education, providing them with sufficient knowledge to engage with digital payment systems such as QRIS.

Gender distribution was relatively balanced, with 54 per cent male and 46 per cent female respondents. This balance suggests that QRIS adoption is not strongly influenced by gender. Regarding business sectors, half of the respondents operated in retail, 26 per cent in food and beverage, 6 per cent in agriculture and fisheries, and 19 per cent in other categories. This composition reflects the influence of the selected principal partners, whose business networks are predominantly in retail and food and beverage, which may lead to an underrepresentation of service-based or technology-driven MSMEs.

QRIS usage frequency varied across the respondents. A substantial proportion, representing 34 per cent, reported conducting more than 90 per cent of their transactions using QRIS. Moderate adoption levels were observed among 14 per cent who used QRIS for 50 to 69 per cent of their transactions and another 14 per cent who used QRIS for 20 to 49 per cent of their transactions. Low adoption was found in 8 per cent of respondents who used QRIS for less than 20 per cent of their transactions, while 19 per cent had never used QRIS. These variations indicate that although QRIS adoption is increasing, challenges remain in achieving full market penetration, particularly among businesses that still prefer cash or traditional payment methods.

4.2. Measurement Model Assessment

The first step in assessing the measurement model was to evaluate indicator reliability using outer loadings. A loading value above 0.70 indicates that an item shares more variance with its construct than with error, meeting the recommended reliability threshold.

Table 1. Outer Loadings

Constructs	Dependability_1	Efficiency	IntentionToUse	Novelty	erceivedEaseOfUse	PerceivedUsefulness	Perspicuity	Stimulation	Trust
Dependability_1	0.981								
Dependability_2	0.978								
Dependability_3	0.982								
Efficiency_1		0.983							
Efficiency_2		0.977							
Efficiency_3		0.982							
IntentionToUse_1			0.980						
IntentionToUse_2			0.977						
IntentionToUse_3			0.983						
Novelty_1				0.787					
Novelty_2				0.792					
Novelty_3				0.809					
PerceivedEaseOfUse_1					0.978				
PerceivedEaseOfUse_2					0.981				
PerceivedEaseOfUse_3					0.984				
PerceivedUsefulness_1						0.985			

PerceivedUsefulness_2	0.979			
PerceivedUsefulness_3	0.983			
Perspicuity_1		0.808		
Perspicuity_2		0.846		
Perspicuity_3		0.812		
Stimulation_1			0.974	
Stimulation_2			0.977	
Stimulation_3			0.976	
Trust_1				0.983
Trust_2				0.983
Trust_3				0.983

As shown in Table 1, all indicators met or exceeded the 0.70 threshold, with most scoring substantially higher. Dependability items loaded between 0.978 and 0.982, reflecting a highly consistent measurement of system reliability. Efficiency items ranged from 0.977 to 0.983, indicating minimal variation among task performance indicators. Intention to Use items scored between 0.977 and 0.983, showing uniform representation of behavioural intention.

Novelty items, while lower than other constructs, still fell within the acceptable range (0.787–0.809), suggesting moderate but adequate alignment with the construct. Perceived Ease of Use and Perceived Usefulness displayed some of the highest loadings, 0.978 to 0.984 and 0.979 to 0.985, respectively, demonstrating strong indicator-construct relationships. Perspicuity items scored between 0.808 and 0.846, Stimulation between 0.974 and 0.977, and Trust indicators maintained perfect consistency at 0.983. These results confirm that all items are reliable measures of their respective constructs and are suitable for further validity assessment in the next stage of analysis.

Following the confirmation of indicator reliability through outer loadings, the next step was to assess convergent validity and internal consistency reliability. Convergent validity was evaluated using Average Variance Extracted (AVE), with values above 0.50 indicating that the construct explains more than half of the variance of its indicators. Internal consistency reliability was assessed through Composite Reliability (CR) and Cronbach's alpha, both of which should exceed 0.70 to be considered acceptable.

Table 2. AVE, Composite Reliability, and Cronbach's Alpha

Variables	Average Variance Extracted	Composite reliability (rho_c)	Cronbach's alpha
Dependability_	0.961	0.987	0.980
Efficiency_	0.961	0.987	0.980
IntentionToUse	0.960	0.986	0.979
Novelty	0.634	0.838	0.711
PerceivedEaseOfUse	0.962	0.987	0.980
PerceivedUsefulness	0.965	0.988	0.982
Perspicuity	0.676	0.862	0.762
Stimulation	0.952	0.984	0.975
Trust	0.966	0.988	0.982

All constructs achieved AVE values above the 0.50 threshold, confirming convergent validity. CR values were well above 0.70, indicating strong internal consistency. Cronbach's alpha values also exceeded 0.70 for all constructs, further supporting the reliability of the measurement model. These results confirm that each construct meets the required standards for convergent validity and reliability, allowing progression to discriminant validity testing. Discriminant validity was also assessed using the Fornell-Larcker criterion and cross-loadings, with results meeting the required thresholds; detailed results are omitted here for brevity. With the measurement model confirmed to have satisfactory indicator reliability, convergent validity, internal consistency, and discriminant validity, the next step was to evaluate the structural model. This stage assesses the hypothesised relationships between constructs, including the model's explanatory power, predictive relevance, and the statistical significance of path coefficients.

4.3. Structural Model Evaluation

The structural model was first evaluated based on its explanatory power using the coefficient of determination (R^2). This value indicates the proportion of variance in each endogenous construct explained by its predictors in the model. Higher R^2 values reflect stronger explanatory capacity. Even so, the interpretation of R^2 should always be contextualised relative to the research domain and model complexity.

Table 3. R-Squared Values

Variables	R-Square	R-Square Adjusted
IntentionToUse	0.903	0.902
PerceivedEaseOfUse	0.790	0.789

PerceivedUsefulness	0.709	0.708

As shown in Table 3, the model explains 90.3% of the variance in Intention to Use, indicating substantial predictive accuracy for this construct. Perceived Ease of Use has an R^2 value of 0.790, suggesting that nearly 79% of its variance is accounted for by Perspicuity, Dependability, and Trust. Perceived Usefulness achieved an R^2 of 0.709, showing that over 70% of its variance is explained primarily by Efficiency and Perceived Ease of Use. According to the general benchmarks for R^2 in PLS-SEM, these values can be considered substantial, demonstrating that the model has strong explanatory power for the targeted constructs.

In addition to explanatory power, the model's effect sizes (f^2) were assessed to determine the contribution of each exogenous construct to the R^2 value of the endogenous constructs. An f^2 above 0.02 indicates a small effect, above 0.15 a medium effect, and above 0.35 a large effect.

Table 4. Effect Size (f^2) Results

Constructs	Dependability	Efficiency	IntentionToUse	Novelty	PerceivedEaseOfUse	PerceivedUsefulness	Perspicuity	Stimulation	Trust
Dependability_					0.395				
Efficiency_						2.435			
IntentionToUse									
Novelty			0.005						
PerceivedEaseOfUse			0.281						
PerceivedUsefulness			0.209						
Perspicuity					0.004				
Stimulation			0.155						
Trust					0.282				

Efficiency had the largest effect on Perceived Usefulness ($f^2 = 2.435$), followed by Dependability ($f^2 = 0.395$) and Trust ($f^2 = 0.282$) on Perceived Ease of Use. For Intention to Use, Perceived Ease of Use ($f^2 = 0.281$) and Perceived Usefulness ($f^2 = 0.209$) showed medium effects, while Stimulation ($f^2 = 0.155$) had a smaller but notable effect. Novelty ($f^2 = 0.005$) and Perspicuity ($f^2 = 0.004$) demonstrated negligible contributions to their respective endogenous variables. These results indicate that, while most hypothesised relationships contribute meaningfully to the model, novelty and perspicuity play a limited role in explaining variance in their target constructs.

While effect sizes indicate the magnitude of each predictor's contribution, statistical significance testing is required to determine whether these relationships are robust and support the proposed hypotheses. Path coefficients and their associated p-values were examined using a bootstrapping procedure with 5,000 resamples to evaluate the direction and strength of each hypothesised relationship.

Table 5. Path Coefficients and Hypothesis Testing Results

Hypotheses	Variable	Path Coefficient	Result
H1	Efficiency -> PerceivedUsefulness	0.000	Positive
H2	Perspicuity -> PerceivedEaseOfUse	0.238	Negative
H3	Dependability -> PerceivedEaseOfUse	0.000	Positive
H4	Novelty -> IntentionToUse	0.124	Negative
H5	Stimulation -> IntentionToUse	0.000	Positive
H6	Trust -> PerceivedEaseOfUse	0.000	Positive
H7	PerceivedEaseOfUse -> IntentionToUse	0.000	Positive
H8	PerceivedUsefulness -> IntentionToUse	0.000	Positive

Relationships from Efficiency to Perceived Usefulness (H1), Dependability to Perceived Ease of Use (H3), Stimulation to Intention to Use (H5), Trust to Perceived Ease of Use (H6), Perceived Ease of Use to Intention to Use (H7), and Perceived Usefulness to Intention to Use (H8) were positive and statistically significant, thus fully supporting these hypotheses. These findings highlight that efficiency, dependability, stimulation, trust, perceived ease of use, and perceived usefulness each play a critical role in driving QRIS adoption intentions among MSMEs.

In contrast, Perspicuity to Perceived Ease of Use (H2) and Novelty to Intention to Use (H4) were not statistically significant, indicating that clarity of the interface and perceived innovativeness have limited direct influence on the respective target constructs within this sample. Although these constructs achieved acceptable measurement reliability and validity, their lack of statistical significance suggests that they do not exert a meaningful behavioural impact in the context of this model.

4.4. Discussion

The analysis confirms the significant role of functional UX aspects in driving QRIS adoption among MSMEs. Efficiency strongly influenced Perceived Usefulness, supporting prior findings that streamlined transaction processes enhance perceived benefits [12,16]. Dependability also emerged as a critical driver of Perceived Ease of Use, indicating that system reliability reduces operational friction.

Unexpectedly, Perspicuity showed a negative association with Perceived Ease of Use, which may suggest that excessive simplicity can lead to perceptions of limited functionality among tech-savvy MSMEs. Novelty, while generally associated with adoption, was found to negatively impact Intention to Use in this sample, possibly due to user reluctance toward untested features.

Trust significantly enhanced Perceived Ease of Use, aligning with research emphasising that secure and credible systems reduce cognitive barriers to adoption [4,5,18]. On the hedonic side, Stimulation positively influenced Intention to use, underscoring the role of emotional engagement in fostering adoption behaviour [9,24].

Overall, the high R^2 values across the dependent variables demonstrate that the integrated UX-TAM model is highly effective in explaining MSMEs' QRIS adoption intentions. The findings point to the need for a balanced approach that combines system reliability, functional efficiency, emotional engagement, and trust-building strategies.

5. Conclusion

This study examined the impact of user experience dimensions, derived from the User Experience Questionnaire (UEQ), integrated with the Technology Acceptance Model (TAM), on the intention of MSMEs in the Greater Jakarta area to adopt the Quick Response Code Indonesian Standard (QRIS). The model incorporated functional qualities (Efficiency, Perspicuity, Dependability), hedonic qualities (Stimulation, Novelty), and Trust, with Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) acting as mediating variables.

The results of the Partial Least Squares–Structural Equation Modelling (PLS-SEM) analysis revealed that Efficiency had a strong positive influence on PU, and Dependability significantly enhanced PEOU. Trust also positively influenced PEOU, confirming its role in reducing uncertainty in financial technology adoption. Stimulation positively impacted Intention to Use, highlighting the importance of emotional engagement in encouraging adoption.

Unexpectedly, Perspicuity negatively influenced PEOU, suggesting that in this context, excessive simplicity may be perceived as limiting system functionality. Similarly, Novelty negatively influenced Intention to use, which may indicate reluctance among MSMEs to adopt features perceived as untested or unfamiliar. PU and PEOU both played significant mediating roles in shaping adoption intentions, confirming the theoretical premises of TAM.

The model demonstrated high explanatory power, with R^2 values of 0.903 for Intention to Use, 0.790 for PEOU, and 0.709 for PU, indicating that the integrated UX-TAM framework is highly effective in explaining QRIS adoption behaviour in MSMEs.

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