OPEN ACCESS

IQTISHODUNA: *Jurnal Ekonomi Islam* 15, no. 2 (October 1, 2026): 791-804
DOI: doi.org/10.54471/iqtishoduna.v14i2.3599

E-ISSN: 2443-0056, P-ISSN: 2252-5661
Accredited *Sinta 2* Number 2/C/C3/KPT/2026

Islamic Socio-Economic Model in Medan's QRIS Payment System: The Roles of Ease of Use, Digital Divide, and Financial Inclusion

Riyan Pradesyah [1*], Khairunnisa [2]

[1,2] Department of Islamic Banking, Faculty of Islamic Religion, Universitas Muhammadiyah Sumatera Utara, Indonesia
[1*]Corresponding author: riyanpradesyah@umsu.ac.id, email: [2]khairunnisa@umsu.ac.id

ABSTRACT

Background and research gap - Digital payment transformation through the Quick Response Code Indonesian Standard (QRIS) has expanded rapidly across Indonesia, yet whether simple technological adoption translates into Islamic socio-economic welfare remains underexplored.

Purpose - This study analyzes the Islamic socio-economic model within the QRIS payment ecosystem in Medan City by examining the structural relationships among QRIS ease of use, digital divide, financial inclusion, and Islamic socio-economic outcomes.

Design/methodology/approach - A quantitative explanatory research design was conducted, involving a purposive sample of 225 active QRIS users in Medan City. Primary data gathered via 5-point Likert scale questionnaires were evaluated using Partial Least Squares-Structural Equation Modeling (PLS-SEM) in SmartPLS.

Key Findings - The empirical findings demonstrate that QRIS ease of use and digital divide exert positive and significant direct impacts on both Islamic socio-economics and financial inclusion. Conversely, financial inclusion has a negative and significant direct impact on Islamic socio-economic outcomes. Furthermore, financial inclusion acts as a negative mediating variable, significantly channelling the indirect effects of both QRIS ease of use and digital divide onto Islamic socio-economics. All seven proposed hypotheses (H1-H7) are supported by the empirical data.

Research limitations/implications - These results confirm that merely expanding access to digital financial services is insufficient to promote societal well-being.

Originality/value - To achieve genuine Islamic socio-economic welfare, policymakers and financial institutions must prioritize quality financial usage, enhanced Sharia financial literacy, and productive, ethical transaction behaviors over passive technology adoption.

Keywords: islamic scio-economics, QRIS, financial inclusion, digital divide, PLS-SEM.

INTRODUCTION

In Indonesia, digital payment usage through QRIS (Quick Response Code Indonesian Standard) has grown significantly in recent years. According to data from the Indonesian Payment System Association (ASPI), around 374 million transactions were made using QRIS in March 2024, marking a 199% surge compared to March of the previous year. Additionally, merchant adoption reached approximately 32 million merchants, reflecting a 28% growth.[1] This growth has captured government attention in advancing a cashless ecosystem across Indonesia. However, alongside the expanding availability and use of QRIS, a new challenge has emerged: rising consumerism among the public. This trend is largely driven by frequent promotional discounts offered by participating merchants. Furthermore, the digital divide remains a widely discussed issue. While it serves as a barrier to digital payment development, it is also viewed as a factor that may help moderate high consumer spending behavior in QRIS transactions.

The growing number of merchants joining the QRIS ecosystem reflects increasing trust among micro, small, and medium enterprises (MSMEs) in digital payment systems.[2] Previously, many individuals and MSMEs hesitated to adopt digital payments due to high

[1] Adi Ahdiat, "QRIS Transactions Continue to Rise Through the First Quarter of 2024," 2024, https://databoks.katadata.co.id/datapublish/2024/07/08/transaksi-qris-terus-meningkat-sampai-kuartal-I-2024.Berdasarkan data Asosiasi Sistem Pembayaran,meningkat 223%25 (yoy).

[2] N E Rafferty, "Integrated QR Payment System (QRIS): Cashless Payment Solution in Developing Country from Merchant Perspective," *Asia Pacific Journal of Information Systems* 32, no. 3 (2022): 630-655, https://api.elsevier.com/content/abstract/scopus_id/85142245990.

Received 2025-06-25, Revised 2026-04-16, Approved 2026-08-13, Available online on 2026-10-01
© 2026 The Author(s). Published by LPPM, Universitas Islam Syarifuddin. This is an open access article under the CC BY 4.0 license

transaction fees, complex fund withdrawal processes, and frequent application errors.[3] Today, the government continues to refine digital payment infrastructure to ensure QRIS remains user-friendly. Nevertheless, managing heightened consumer spending during digital payment usage remains a critical priority for policymakers. Research on non-cash payment adoption extends beyond Indonesia, with similar studies conducted across Asia; including India,[4] Malaysia,[5] Vietnam,[6] Bahrain[7] and Jordan,[8] as well as in Europe and Australia.[9]

Despite overall growth in QRIS adoption, variations in digital payment adoption persist across regions. As an economic growth center in Indonesia, Medan City holds substantial potential for digital payment expansion. However, disparities in education, economic capability, digital literacy, and technological access continue to influence the success of QRIS implementation. These conditions indicate that payment technology adoption depends not only on physical infrastructure, but also on social and economic factors that shape public openness to technological innovation.

From an Islamic economic perspective, digital payment systems serve not only as tools to improve transaction efficiency, but also as vehicles to achieve justice (*'adl*), public interest (*maslahah*), and human well-being (*falah*). The application of financial technology in Islamic economics should deliver broad societal benefits by expanding access to Sharia-compliant financial services. Therefore, evaluating QRIS implementation requires an approach that encompasses technological, social, economic, and ethical Islamic dimensions.

Previous literature demonstrates that perceived ease of use is a primary driver influencing individual adoption of digital payment systems.[10] When transactions become

[3] Riyan Pradesyah, Khairunnisa Khairunnisa, and Abdul Hadi Ismail, "TECHNOLOGY ACCEPTANCE MODEL, HALAL MSMEs INTENTION IN USING QRIS," *Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE)* 7, no. 1 (2024): 809-820, https://e-journal.uac.ac.id/index.php/iijse/article/view/4014.

[4] Y Prakash, "Demonetisation, Digitalisation in India: Towards a Cashless Economy," *International Journal of Business Continuity and Risk Management* 9, no. 4 (2019): 333-349, https://api.elsevier.com/content/abstract/scopus_id/85073205670.

[5] V Balakrishnan, "Drivers and Inhibitors for Digital Payment Adoption Using the Cashless Society Readiness-Adoption Model in Malaysia," *Technology in Society* 65 (2021), https://api.elsevier.com/content/article/eid/1-s2.0-S0160791X21000294.

[6] H T M Dieu, "Cashless Vietnam: A Study on Intention and Adoption of Cashless Payment," *Journal of Science and Technology Policy Management* 16, no. 2 (2025): 344-364, https://www.scopus.com/inward/record.uri?partnerID=HzOxMe3b&scp=85173522352&origin=inward.

[7] Y A Albastaki, "Toward a Cashless Society: Assessing the Acceptance of Bahrain BenefitPay Using TAM and SEM," *Competitiveness Review* (2023), https://api.elsevier.com/content/abstract/scopus_id/85165244652.

[8] M Shehadeh, "Digital Financial Literacy and Usage of Cashless Payments in Jordan: The Moderating Role of Gender," *International Journal of Accounting and Information Management* 33, no. 2 (2025): 354-382, https://api.elsevier.com/content/article/eid/1-s2.0-S1834764924000049.

[9] Y T Lam, "Quantitative Analysis of Australia's Embrace of a Cashless Society," *ACIS 2022 - Australasian Conference on Information Systems, Proceedings*, 2022, https://api.elsevier.com/content/abstract/scopus_id/85174413179.

[10] H Siagian, "The Effect of Perceived Security, Perceived Ease of Use, and Perceived Usefulness on Consumer Behavioral Intention through Trust in Digital Payment Platform," *International Journal of Data and Network Science* 6, no. 3 (2022): 861-874, https://www.scopus.com/inward/record.uri?partnerID=HzOxMe3b&scp=85129075079&origin=inward.

easier, public interest in financial technology increases because users perceive greater utility compared to traditional payment methods. Furthermore, ease of use encourages broader participation in the digital financial ecosystem, ultimately expanding access to formal financial services.

Another critical factor shaping digital payment usage is the digital divide. The digital divide reflects disparities in individuals' ability to access, use, and optimize information technology.[11] Individuals with higher digital literacy adapt to technological innovations more easily than those with limited skills or access. Consequently, the digital divide serves as a key determinant in whether QRIS implementation successfully drives financial inclusion.

Financial inclusion concerns the availability and accessibility of formal financial services for all segments of society. In Islamic economics, financial inclusion is evaluated not only by service accessibility, but also by alignment with Sharia principles. Expanding financial inclusion is expected to enhance access to financial instruments that improve productivity, welfare, and overall quality of life. While QRIS research is growing, existing studies primarily focus on technology adoption, consumer behavior, and adoption drivers. Empirical studies integrating QRIS ease of use, the digital divide, financial inclusion, and their combined impact on Islamic socio-economic outcomes remain limited. Furthermore, previous literature has yet to fully detail how these variables interact within a unified Islamic socio-economic model.

To address this research gap, there is a need for an empirical model that explains the relationships between QRIS ease of use, the digital divide, financial inclusion, and Islamic socio-economic aspects. Rather than reconstructing theoretical frameworks, this study develops an empirical model to analyze how QRIS usage influences financial inclusion and contributes to Islamic socio-economic objectives among residents of Medan City. Specifically, this research examines the impact of QRIS Ease of Use and the Digital Divide on Financial Inclusion and their subsequent implications for Islamic Socio-Economic Outcomes in Medan City. The findings aim to enrich Islamic economics literature, particularly regarding digital payment transformations and Sharia-based financial inclusion.

Literature Review

Islamic Socio-Economic Concept

Islamic socio-economics is a Sharia-based framework that prioritizes justice, welfare, and ethical conduct across all economic activities. In modern settings, Islamic socio-economic principles can be observed in digital payment platforms such as the Quick Response Code Indonesian Standard (QRIS).[12] QRIS is a financial transaction innovation leveraging technology to facilitate fast and secure payments. A core principle of Islamic socio-economics is justice, which guarantees equal rights to access financial services for all individuals. Designed as an inclusive platform, QRIS reaches diverse social segments, including small and medium enterprises (SMEs).[13] By eliminating the

[11] Y He, "Crossing the Digital Divide: The Impact of the Digital Economy on Elderly Individuals' Consumption Upgrade in China," *Technology in Society* 71 (2022), https://api.elsevier.com/content/article/eid/1-s2.0-S0160791X22002822.

[12] Michael Widjaja and Nilo Legowo, "Examining Drivers of Integrated QR Payment System (QRIS) Adoption Among Generation X in Indonesia" 34 (2025): 327-362.

[13] Dedy Husrizal Syah, Faisal Rahman Dongoran, Eko Wahyu Nugrahadi, dan Reza Aditia, "Understanding the Technology Acceptance Model in the QRIS Usage: Evidence from SMEs in Indonesia,"

need for costly payment infrastructure, QRIS enables SMEs to conduct digital transactions, compete in broader markets, and increase revenues.

Additionally, QRIS promotes transparency, a fundamental value in Islamic economics. Digital recording of every QRIS transaction minimizes fraud risks.[14] Honesty and openness foster public confidence and trust in commercial transactions, creating a healthier economic environment. Nevertheless, implementing QRIS within an Islamic socio-economic context presents challenges. A primary barrier is uneven digital literacy. Many individuals, particularly in rural areas, lack familiarity with digital technology and QRIS operation. Government bodies and financial institutions must therefore prioritize educational outreach and user training. Another vital consideration is Sharia compliance, ensuring transactions remain free from interest (*riba*) and ambiguity (*gharar*).[15] Ensuring that QRIS operates in strict accordance with Islamic law requires active collaboration between QRIS providers and Islamic financial institutions.

QRIS offers substantial opportunities to advance Islamic socio-economics. Technological integration empowers individuals to access formal financial services, opening pathways to credit and investment opportunities. In Medan City, QRIS adoption can stimulate local economic activity by accelerating transaction velocity between consumers and merchants. This accelerated circulation supports job creation and economic stability. Moreover, efficient payment processing allows business owners to allocate more effort toward expanding products and services.

Overall, integrating QRIS into an Islamic socio-economic framework yields notable benefits for both social equity and economic growth. Aligning digital tools with Sharia principles helps foster a prosperous and equitable society. Effective collaboration among stakeholders remains essential to achieving these Islamic socio-economic goals.

QRIS Payment System

The Quick Response Code Indonesian Standard (QRIS) payment system represents a major milestone in Indonesia's digital financial landscape.[16] QRIS simplifies transactions through scannable QR codes, enabling rapid and efficient payments. Within an Islamic socio-economic framework, QRIS adoption holds important implications for expanding financial inclusion and supporting social justice. By offering an accessible, low-cost transaction system, QRIS empowers SMEs to engage in wider commercial markets, strengthening business sustainability and income growth.

Furthermore, QRIS enhances transaction transparency and accountability. Digital transaction logging reduces fraudulent activity and builds public trust in financial systems. Despite these advantages, adoption challenges persist, particularly concerning

International Journal of Research in Business and Social Science 11, no. 6 (2022): 12-19, https://doi.org/10.20525/ijrbs.v11i6.1917.

[14] N C Tiovilda, "Investigating the Technology Acceptance of QRIS Payment among Indonesian Generation X," *Proceedings of the 2025 19th International Conference on Ubiquitous Information Management and Communication, IMCOM 2025*, 2025, https://api.elsevier.com/content/abstract/scopus_id/85218088110.

[15] S J JOANNA, "The Institutionalization of 'Cashless Poland.' Values, Norms, Sanctions and Grand Narrations in the SMEs' Perspective on the Adoption of Cashless Payments," *Polish Sociological Review*, 2022, https://api.elsevier.com/content/abstract/scopus_id/85129706273.

[16] Isra Hayati et al., "Optimizing the Adoption of QRIS : Analyzing Merchant Readiness and Customer Acceptance in CV Mandiri Kopi Medan Digital Payment Ecosystem" 6, no. 1 (2025): 826-835.

digital literacy in remote areas. Targeted education and training are critical to ensure users fully benefit from the platform.

Sharia compliance remains a central requirement in digital payment adoption. Transactions must strictly avoid *riba* and *gharar*. Continued cooperation between QRIS service providers and Sharia-compliant financial institutions ensures that digital payment mechanisms adhere to Islamic standards. Ultimately, QRIS serves as an effective tool for building an inclusive, equitable, and sustainable economy.

METHODS

This study employs a quantitative approach with an explanatory research design. A quantitative methodology was selected to evaluate causal relationships among four key variables: QRIS Ease of Use, Digital Divide, Financial Inclusion, and Islamic Socio-Economic Outcomes. The explanatory design enables testing of both direct and indirect structural relationships.

The research was conducted in Medan City, North Sumatra. Medan was chosen as the study location due to its status as a major economic center experiencing rapid growth in digital payment adoption. In addition, the city's diverse demographic profile provides a representative setting for examining QRIS usage behavior.

The target population consists of residents in Medan City who have used QRIS for financial transactions. Because the precise population size is unknown, non-probability purposive sampling was applied. Respondents were selected based on specific eligibility criteria: residing in Medan City, Aged 17 years or older, having prior experience using QRIS for financial transactions, and having experience using digital financial services.

Respondent participation was entirely voluntary. Prior to completing the survey, participants were informed of the study's objectives, data confidentiality guarantees, and their right to withdraw at any time. All data were collected strictly for academic purposes. The measurement instrument utilized a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Questionnaires were distributed online via Google Forms. Data processing was conducted using SmartPLS 3.0 software. Hypotheses were evaluated using a bootstrapping procedure to examine path coefficients, t-statistics, and p-values.[17] Outer loadings and Cronbach's Alpha were examined to evaluate item reliability,[18] while potential multicollinearity was assessed using the Variance Inflation Factor (VIF).[19]

RESULT AND DISCUSSION

The study surveyed 225 QRIS users in Medan City. Regarding educational background, the vast majority held a Bachelor's or Diploma 4 degree (221 respondents; 98.22%). By gender, respondents were predominantly female (190 respondents; 84.44%). In terms of age, most participants fell within the 25-30 age range (176

[17] Tamriatin Hidayah, "Sharia-Based Transformational Leadership and Employee Loyalty : The Mediating Role of Psychological Empowerment in Indonesian Public Sector Organizations" 1, no. 1 (2026): 311-332.

[18] Niyati Jain and T. V. Raman, "A Partial Least Squares Approach to Digital Finance Adoption," *Journal of Financial Services Marketing* 27, no. 4 (2022): 308-321, https://doi.org/10.1057/s41264-021-00127-8.

[19] Carmen Valls Mart and Pedro Antonio Mart, *Partial Least Squares Structural Equation Modeling (PLS-SEM) Applications in Economics and Finance*, *Partial Least Squares Structural Equation Modeling (PLS-SEM) Applications in Economics and Finance*, 2021.

respondents; 78.22%). These profile statistics show that the sample primarily represents educated, productive-age female QRIS users.

An outer loading evaluation was conducted for each questionnaire item, alongside the Average Variance Extracted (AVE) calculation. The measurement results are summarized below:

Table 1. Outer Loadings dan AVE

Variabel	Code	Outer Loading	AVE
QRIS EoU (X1)	X1.1	0,760	0,585
	X1.2	0,780	
	X1.3	0,761	
	X1.4	0,796	
	X1.5	0,805	
	X1.6	0,794	
	X1.7	0,701	
	X1.8	0,713	
DD (X2)	X2.1	0,891	0,735
	X2.2	0,838	
	X2.5	0,799	
	X2.6	0,896	
ISE (Y)	Y.1	0,882	0,692
	Y.2	0,811	
	Y.3	0,800	
	Y.4	0,868	
	Y.5	0,795	
FI (Z)	Z.3	0,831	0,782
	Z.4	0,924	
	Z.5	0,874	
	Z.7	0,905	

Source: Processed Data

As shown in Table 1, indicator outer loadings across all constructs exceed the required threshold of 0.7, confirming indicator reliability. Furthermore, AVE values for each construct exceed 0.5, demonstrating adequate convergent validity. Reliability was further confirmed using Cronbach's Alpha and Composite Reliability tests:

Table 2. Heterotrait-Monotrait Ratio (HTMT) and Reliability Test

Variable	QRIS EoU (X1)	DD (X2)	ISE(Y)	FI (Z)	Cronbach's Alpha	Composite Reliability
QRIS EoU (X1)					0.965	0.918
DD (X2)	0.862				0.879	0.917
ISE (Y)	0.861	0.875			0.889	0.918
FI (Z)	0.863	0.858	0.754		0.907	0.935

Source: Processed Data

The reliability results show Cronbach's Alpha values ranging from 0.861 to 0.965 and Composite Reliability values ranging from 0.917 to 0.935 across all constructs. These values indicate strong internal consistency. Discriminant validity was established using

the Heterotrait-Monotrait Ratio (HTMT), with all values falling below the maximum recommended threshold of 0.90.

Table 3. Multicollinearity and Model Fit Test

Variable	QRIS EoU (X1)	DD (X2)	ISE (Y)	FI (Z)
QRIS EoU (X1)			0,959	
DD (X2)			0,699	
ISE (Y)				
FI (Z)			0,130	
RMS Theta: 0.315				

Source: Processed Data

VIF calculations yielded values well below 10, indicating no problematic multicollinearity among predictor variables. An RMS Theta value of 0.315 confirms acceptable model fit for evaluating structural paths.

Table 4. Hypothesis Test Results

Hypotesis	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Conclusion
Direct Effect				
X1 -> Y	0,650	9,317	0,000	Supported
X1 -> Z	0,489	4,142	0,000	Supported
X2 -> Y	0,530	7,229	0,000	Supported
X2 -> Z	0,385	4,599	0,000	Supported
Z -> Y	-0,233	2,687	0,007	Supported
Indirect Effec				
X1 -> Z -> Y	-0,114	2,432	0,015	Supported
X2 -> Z -> Y	-0,090	2,463	0,014	Supported

Source: Processed Data

Table 4 shows that the results support the research hypotheses (H1-H7), where the variables QRIS Ease of Use and Digital Divide have a positive effect on Islamic Socio-Economics, while financial inclusion has a negative effect on Islamic Socio-Economics. In addition, the variables QRIS Ease of Use and Digital Divide also have a positive effect on financial inclusion. Furthermore, the variables QRIS Ease of Use and Digital Divide have a negative effect on Islamic Socio-Economics through the financial inclusion variable.

Discussion

QRIS Ease of Use Affects Islamic Socio-Economics

The evaluation of H1 shows that QRIS Ease of Use has a positive and significant effect on Islamic Socio-Economics (0 = 0.650, T = 9.317, P = 0.000), supporting H1.

This result indicates that greater perceived ease of use strengthens digital payment contributions to Islamic socio-economic conditions. Convenient payment processes allow users to complete transactions quickly and efficiently, stimulating local business activity without relying on cash. In Islamic socio-economics, seamless payment systems support market efficiency and operational transparency. The strong path coefficient (0.650) highlights that user-friendly digital payment systems are a key direct driver of

positive socio-economic impacts.[20] This condition can boost public economic activity because transactions do not rely on cash. From an Islamic socio-economic perspective, transaction convenience also supports more efficient and transparent economic activities. QRIS offers a relatively simple payment system, expanding public participation in the digital economy.[21] This ease of use is particularly important in the context of shifting public behavior toward digital transactions. A path coefficient of 0.650 also shows that the effect of QRIS Ease of Use on Islamic Socio-Economics represents a relatively strong direct relationship within the research model. In other words, an increase in public perception of QRIS ease of use is likely to be followed by a greater contribution of the digital payment system to Islamic socio-economic conditions.

QRIS Ease of Use Affects Financial Inclusion

H2 testing demonstrates that QRIS Ease of Use positively and significantly impacts Financial Inclusion (0 = 0.489, T = 4.142, P = 0.000), supporting H2. When digital payment systems are straightforward to navigate, user entry barriers into formal financial channels are lowered. Ease of use enables previously underserved groups to engage with digital financial tools. In an Islamic socio-economic context, broader financial access promotes wider public participation in productive economic activities.[22]

The coefficient of 0.489 indicates a relatively strong positive relationship. Therefore, the development of QRIS should not only focus on increasing the number of users, but also on improving user experience and ease of use so that the benefits of payment system digitalization can reach the broader public.

Digital Divide Affects Islamic Socio-Economics

Testing for H3 reveals a positive and significant effect of the Digital Divide on Islamic Socio-Economics (0 = 0.530, T = 7.229, P = 0.000), supporting H3. While the digital divide is typically viewed as a restrictive barrier, in this model construct, the variable reflects active awareness of technological gaps, which motivates users to acquire digital skills to participate in modern digital commerce. These findings emphasize that digital readiness efforts are essential to ensuring broad participation in Islamic economic growth.

This positive result indicates that disparities in technology access and usage are related to how society adapts to the growth of the digital economy. As people encounter payment technologies such as QRIS, a need emerges to enhance technological skills, access, and usage to keep pace with expanding economic activities. In an Islamic socio-economic context, this finding highlights the importance of addressing the digital dimension to promote equitable economic participation. Digital transformation is not merely about the availability of technology, but also about how that technology can be used by the public to increase their involvement in economic activities.

[20] F Chohan, "Building Customer Loyalty In Digital Transaction Using QR Code: Quick Response Code Indonesian Standard (QRIS)," *Journal of Distribution Science* 20, no. 1 (2022): 1-11, https://api.elsevier.com/content/abstract/scopus_id/85123521079.

[21] Rodiana Listiawati, Rahmanita Vidyasari, and Novitasari Novitasari, "QRIS Efficiency in Improving Digital Payment Transaction Services for Culinary Micro-Small and Medium Enterprises in Depok City," *Operations Research: International Conference Series* 3, no. 2 (2022): 67-73.

[22] Riyan Pradesyah, Munawaroh, and Rizqy Fadhlina Putri, "The Influence Of Non-Cash Payments And Transaction Costs On Sharia Bank Customer Loyalty In Using M-Banking" 8, no. 3 (2025): 8148-8159.

Thus, the result for H3 shows that digital aspects are significantly linked to Islamic socio-economic conditions. Strengthening the digital ecosystem must be accompanied by efforts to ensure that the public has adequate opportunities and capabilities to use digital payment technology.

Digital Divide Affects Financial Inclusion

H4 testing indicates that the Digital Divide has a positive and significant effect on Financial Inclusion (0 = 0.385, T = 4.599), supporting H4. Disparities in access act as a catalyst for individuals seeking greater inclusion in formal digital finance. To maximize inclusion benefits, initiatives focused on digital literacy, network accessibility, and user guidance remain essential[23]. Although the observed relationship is positive, this result should be interpreted based on how the Digital Divide variable is operationalized in this study. This finding does not mean that an increasing digital divide is a normatively desirable condition. Instead, it suggests that disparities in digital access or skills are part of the dynamics accompanying the transition toward digital financial inclusion.

Therefore, expanding financial inclusion through QRIS must be accompanied by strategies to reduce digital barriers. Education, enhanced digital literacy, improved access to devices and networks, and guidance on using digital payment services are essential to ensure that the benefits of the digital financial system are not limited to specific groups of people.

Financial Inclusion Affects Islamic Socio-Economics

H5 testing demonstrates that Financial Inclusion exerts a negative and significant direct effect on Islamic Socio-Economics (0 = - 0.233, T = 2.687, P = 0.007), supporting H5. This finding suggests that expanding financial access alone does not automatically guarantee improved socio-economic outcomes aligned with Islamic values. From an Islamic perspective, financial inclusion must emphasize Sharia compliance, productive resource allocation, and social welfare (*maslahah*) rather than unguided access. Without adequate financial education, increased access may fail to yield optimal social and economic benefits.

From the perspective of Islamic economics, financial inclusion should ideally focus not only on increasing public access to financial services, but also consider public welfare, justice, sustainability, and compliance with Sharia principles.[24]. If an increase in financial access is not accompanied by a good understanding of how to use financial services productively and in line with Sharia principles, its socio-economic benefits may not be optimal.

Therefore, the results for H5 imply that strengthening financial inclusion should focus on high-quality financial inclusion, rather than merely increasing the number of people using financial services. In the context of QRIS, the use of digital payments needs to be accompanied by strengthening financial literacy and public understanding of transaction principles aligned with Islamic values.

QRIS Ease of Use Affects Islamic Socio-Economics through Financial Inclusion

Indirect path testing for H6 reveals that QRIS Ease of Use has a negative and significant indirect effect on Islamic Socio-Economics when mediated by Financial Inclusion (0 = - 0.114, T = 2.432, P = 0.015) , supporting H6. Although QRIS ease of use

[23] Ahmad Afandi et al., "Digital Marketing Transformation in Increasing Fundraising at Islamic Philanthropic Institutions" 0696 (2025).

[24] Edisah Putra Nainggolan Khairul Anwar pulungan, "The Influence of Financial Literacy and Socialization on QRIS Usage Among Halal MSME Operators," *Al-ihsan : jurnal bisnis dan Ekonomi Syariah* 02, no. 01 (2024): 01-05.

exerts a direct positive effect on Islamic socio-economics, passing through financial inclusion introduces a negative mediating path.

These findings reveal an interesting mediating mechanism. Directly, QRIS Ease of Use has a positive effect on Islamic Socio-Economics with a coefficient of 0.650. However, when this effect is channeled through Financial Inclusion, the indirect effect becomes negative at -0.114. This indicates that Financial Inclusion acts as an intervening variable that partially alters the direction of the relationship between QRIS Ease of Use and Islamic Socio-Economics. While QRIS ease of use inherently provides direct benefits to socio-economic activities, when this ease of use increases financial inclusion, the resulting mechanism does not necessarily generate the same positive impact on Islamic Socio-Economics.

These results emphasize the importance of distinguishing between ease of access to financial services and the quality of financial service utilization. An easy-to-use QRIS system can expand public participation in the payment system, but it is necessary to ensure that this expansion is directed toward productive, inclusive economic activities aligned with Islamic economic values. Thus, H6 makes an important contribution to the research model by demonstrating that the benefits of payment digitalization for Islamic socio-economics do not always occur linearly. There is an intermediary mechanism that requires attention, specifically how increased financial inclusion is translated into economic activities that deliver public welfare.

Digital Divide Affects Islamic Socio-Economics through Financial Inclusion

H7 testing shows that the Digital Divide exerts a negative and significant indirect effect on Islamic Socio-Economics through Financial Inclusion (0 = - 0.090, T = 2.463, P = 0.014), supporting H7. These results demonstrate a complex mediating mechanism. Expanding financial inclusion amid existing digital skill gaps can lead to uneven economic benefits. To uphold Islamic economic principles of fairness and equity, digital payment expansion must incorporate supportive measures that bridge technological barriers across all user groups.

This difference in direction indicates a complex mediating mechanism. Disparities in technology access or usage may relate to the growth of digital economic activities; however, when this process is channeled through financial inclusion, its impact on Islamic Socio-Economics becomes negative. This finding demonstrates that expanding financial inclusion through digital technology does not automatically lead to an equitable distribution of economic benefits. If certain social groups face limited digital skills, device access, network connectivity, or understanding of digital financial services, the digitalization process can create uneven benefits. From an Islamic socio-economic perspective, this condition highlights the importance of justice and equitable benefit distribution in digital economic transformation. Developing QRIS and digital payment systems must be accompanied by strategies to reduce digital barriers, improve financial literacy, and ensure that people from diverse backgrounds receive proportional benefits from digital financial growth.

Overall, the findings show that all seven research hypotheses are supported. QRIS Ease of Use and the Digital Divide have positive effects on Islamic Socio-Economics, whereas Financial Inclusion has a negative effect on Islamic Socio-Economics. On the other hand, both QRIS Ease of Use and the Digital Divide exert positive effects on

Financial Inclusion. Furthermore, when Financial Inclusion serves as a mediating variable, QRIS Ease of Use and the Digital Divide show negative indirect effects on Islamic Socio-Economics.

The main finding of this study is that payment digitalization via QRIS has a direct positive impact on Islamic socio-economic aspects, but the mechanism operating through financial inclusion yields a negative effect. This indicates that measuring the success of digital payment transformation strictly by ease of use and expanded financial access is insufficient. Quality of use, financial literacy, equitable digital access, and alignment with Islamic socio-economic principles are also crucial factors.

Additionally, the demographic profile shows that the study involved 225 QRIS users in Medan City, with the majority being female, aged 25-30 years, and holding a bachelor's or diploma degree. This provides context indicating that the findings primarily represent productive-age, highly educated QRIS users.

CONCLUSION

Based on the findings among QRIS users in Medan City, it can be concluded that QRIS Ease of Use has a positive and significant effect on Islamic Socio-Economics as well as Financial Inclusion. This finding indicates that the easier it is for the public to use QRIS, the greater its contribution to economic activity and the expansion of access to digital financial services. In addition, the Digital Divide has a positive and significant effect on Islamic Socio-Economics and Financial Inclusion, showing a clear connection between digital access and usage dynamics and the growth of public economic and financial activities. Conversely, Financial Inclusion has a negative and significant effect on Islamic Socio-Economics. This result demonstrates that increased access to financial services does not automatically lead to socio-economic improvements aligned with Islamic economic goals. Therefore, financial inclusion must focus not merely on expanding access, but also on the quality of financial service usage that yields tangible social and economic benefits for society.

Furthermore, Financial Inclusion mediates the effects of QRIS Ease of Use and the Digital Divide on Islamic Socio-Economics, yielding negative indirect effects. This finding indicates that the impact of payment digitalization on Islamic socio-economics operates through a complex mechanism. While QRIS ease of use directly creates a positive impact, its effect turns negative when operating through financial inclusion. A similar pattern is observed in the relationship between the Digital Divide and Islamic Socio-Economics mediated by Financial Inclusion. Consequently, all hypotheses from H1 to H7 in this study are supported. Overall, this research confirms that optimizing QRIS to support Islamic socio-economics cannot rely solely on making transactions easier and expanding financial inclusion. It also demands focused attention on the quality of digital financial service utilization, equitable technology access, and the public's capacity to use digital payment systems productively and in accordance with Islamic economic values.

Author Contributions

Riyan Pradesyah: Contributed to research formulation, data processing, and result analysis.
Khairunnisa: Contributed to questionnaire mapping and manuscript translation.

Acknowledgements

The authors express their gratitude to Universitas Muhammadiyah Sumatera Utara for funding this research project. The authors also thank all individuals and institutions who assisted during data collection and manuscript review.

Declaration of Competing Interest
The author declares that there is no conflict of interest.
Ethical Approval
Ethical approval No patient-identifying parts in this paper were used or known to the authors. Therefore, no ethical approval was requested.

REFERENCES

Afandi, Ahmad, Alfi Amalia, and Syahrul Amsari. "Digital Marketing Transformation in Increasing Fundraising at Islamic Philanthropic Institutions." Research Horizon 5, no. 2 (2025): 361–372. https://doi.org/10.54518/rh.5.2.2025.549.

Ahdiat, Adi. "Transaksi QRIS Terus Meningkat Sampai Kuartal I 2024." Databoks, 2024. https://databoks.katadata.co.id/datapublish/2024/07/08/transaksi-qris-terus-meningkat-sampai-kuartal-i-2024.

Albastaki, Yousif Abdullatif. "Toward a Cashless Society: Assessing the Acceptance of Bahrain BenefitPay Using TAM and SEM." Competitiveness Review: An International Business Journal 34, no. 1 (2024): 193–207. https://doi.org/10.1108/CR-12-2022-0184.

Balakrishnan, Vimala, and Nor Liyana Mohd Shuib. "Drivers and Inhibitors for Digital Payment Adoption Using the Cashless Society Readiness-Adoption Model in Malaysia." Technology in Society 65 (2021): 101554. https://doi.org/10.1016/j.techsoc.2021.101554.

Chohan, F. "Building Customer Loyalty in Digital Transaction Using QR Code: Quick Response Code Indonesian Standard (QRIS)." Journal of Distribution Science 20, no. 1 (2022): 1–11. https://doi.org/10.15722/jds.20.01.202201.1.

Dieu, H. T. M. "Cashless Vietnam: A Study on Intention and Adoption of Cashless Payment." Journal of Science and Technology Policy Management 16, no. 2 (2025): 344–364. https://doi.org/10.1108/JSTPM-02-2022-0031.

Hayati, Isra, Hastuti Olivia, Alfi Amalia, and Titis Budi Prihatin. "Optimizing the Adoption of QRIS: Analyzing Merchant Readiness and Customer Acceptance in CV Mandiri Kopi Medan Digital Payment Ecosystem." Proceedings International Seminar on Islamic Studies 6, no. 1 (2025): 826–835.

He, Y. "Crossing the Digital Divide: The Impact of the Digital Economy on Elderly Individuals' Consumption Upgrade in China." Technology in Society 71 (2022). https://doi.org/10.1016/j.techsoc.2022.102141.

Hidayah, Tamriatin, Hamzah Fansuri Yusuf, and Pawestri Winahyu. "Sharia-Based Transformational Leadership and Employee Loyalty: The Mediating Role of Psychological Empowerment in Indonesian Public Sector Organizations." IQTISHODUNA: Jurnal Ekonomi Islam 15, no. 1 (2026): 311–332. https://doi.org/10.54471/iqtishoduna.v15i1.3485.

Jain, Niyati, and T. V. Raman. "A Partial Least Squares Approach to Digital Finance Adoption." Journal of Financial Services Marketing 27, no. 4 (2022): 308–321. https://doi.org/10.1057/s41264-021-00127-8.

JOANNA, S. J. “The Institutionalization of ‘Cashless Poland.’ Values, Norms, Sanctions and Grand Narrations in the SMEs’ Perspective on the Adoption of Cashless Payments.” Polish Sociological Review (2022). https://doi.org/10.26412/psr217.07.

Khairul Anwar Pulungan, and Edisah Putra Nainggolan. “Pengaruh Literasi Keuangan Dan Sosialisasi Terhadap Penggunaan QRIS Pada Pelaku Kegiatan UMKM Halal.” Al-Ihsan: Jurnal Bisnis dan Ekonomi Syariah 2, no. 1 (2024): 13–22.

Lam, Y. T. “Quantitative Analysis of Australia’s Embrace of a Cashless Society.” In ACIS 2022 - Australasian Conference on Information Systems, Proceedings, 2022.

Listiawati, Rodiana, Rahmanita Vidyasari, and Novitasari Novitasari. “QRIS Efficiency in Improving Digital Payment Transaction Services for Culinary Micro-Small and Medium Enterprises in Depok City.” Operations Research: International Conference Series 3, no. 2 (2022): 67–73.

Mart, Carmen Valls, and Pedro Antonio Mart. Partial Least Squares Structural Equation Modeling (PLS-SEM) Applications in Economics and Finance. 2021.

Pradesyah, Riyan, and Abdul Hadi Ismail. Planned Behaviour Dalam Mendukung Cashless Society: Meningkatkan Intensitas UMKM Halal Menggunakan Pembayaran Nontunai. Edited by Frida Yanti Sirait. Medan: umsupress, 2024.

Pradesyah, Riyan, Khairunnisa Khairunnisa, and Abdul Hadi Ismail. “Technology Acceptance Model, Halal MSMEs Intention in Using QRIS.” Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE) 7, no. 1 (2024): 809–820. https://e-journal.uac.ac.id/index.php/iijse/article/view/4014.

Pradesyah, Riyan, Munawaroh, and Rizqy Fadhlina Putri. “The Influence of Non-Cash Payments and Transaction Costs on Sharia Bank Customer Loyalty in Using M-Banking.” Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE) 8, no. 3 (2025): 8148–8159. https://doi.org/10.31538/iijse.v8i3.7215.

Prakash, Y. “Demonetisation, Digitalisation in India: Towards a Cashless Economy.” International Journal of Business Continuity and Risk Management 9, no. 4 (2019): 333–349. https://ideas.repec.org/a/ids/ijbcrm/v9y2019i4p333-349.html.

Rafferty, N. E. “Integrated QR Payment System (QRIS): Cashless Payment Solution in Developing Country from Merchant Perspective.” Asia Pacific Journal of Information Systems 32, no. 3 (2022): 630–655. https://doi.org/10.30595/jesh.v2i1.310.

Shehadeh, M. “Digital Financial Literacy and Usage of Cashless Payments in Jordan: The Moderating Role of Gender.” International Journal of Accounting and Information Management 33, no. 2 (2025): 354–382. https://doi.org/10.1108/IJAIM-03-2024-0115.

Siagian, Hotlan, Zeplin Jiwa Husada Tarigan, Sautma Ronni Basana, and Ribut Basuki “The Effect of Perceived Security, Perceived Ease of Use, and Perceived Usefulness on Consumer Behavioral Intention through Trust in Digital Payment Platform.” International Journal of Data and Network Science 6, no. 3 (2022): 861–874. http://dx.doi.org/10.5267/j.ijdns.2022.2.010.

Syah, Dedy Husrizal, Faisal Rahman Dongoran, Eko Wahyu Nugrahadi, and Reza Aditia. “Understanding the Technology Acceptance Model in the QRIS Usage: Evidence

from SMEs in Indonesia." International Journal of Research in Business and Social Science 11, no. 6 (2022): 12–19. https://doi.org/10.20525/ijrbs.v11i6.1917.

Tiovilda, N. C. "Investigating the Technology Acceptance of QRIS Payment among Indonesian Generation X." In Proceedings of the 2025 19th International Conference on Ubiquitous Information Management and Communication, IMCOM 2025, 2025. https://doi.org/10.1109/IMCOM64595.2025.10857494.

Widjaja, Michael, and Nilo Legowo. "Examining Drivers of Integrated QR Payment System (QRIS) Adoption Among Generation X in Indonesia." Malaysian Journal of Consumer & Family Economics 34 (2025): 327–362. https://doi.org/10.60016/majcafe.v34.11.