

## FROM CASH TO QRIS: THE IMPACT OF DIGITAL PAYMENT SYSTEMS ON MICRO ENTERPRISE SALES

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**Abstract:** This study examines the impact of the Quick Response Code Indonesian Standard (QRIS) on sales performance among micro enterprises in Indonesia, a sector that represents over 99% of national businesses and plays a critical role in employment and economic resilience. Using a mixed-methods design, data were collected through surveys of 200 micro enterprises across the food, retail, and service sectors, complemented by semi-structured interviews with 20 business owners. The quantitative results reveal that QRIS adoption increased average sales by 35% within six months, with the food and beverage sector experiencing the highest growth at 45%. Regression analysis confirms a positive and significant association between QRIS usage and revenue growth ( $p < .01$ ), while qualitative findings emphasize improved transaction efficiency, enhanced customer loyalty, and greater attractiveness to younger, digitally literate consumers. Despite these benefits, challenges remain in digital literacy, infrastructure, and security. By providing empirical evidence from an underexplored context, this study contributes to the literature on digital financial inclusion and the role of technology in supporting micro enterprise competitiveness. The findings highlight both managerial and policy implications for accelerating inclusive digital transformation in emerging economies.

**Keywords:** QRIS, digital payments, micro enterprises, financial inclusion, Indonesia

**Abstrak:** Penelitian ini mengkaji dampak penggunaan Quick Response Code Indonesian Standard (QRIS) terhadap kinerja penjualan usaha mikro di Indonesia, yang merupakan sektor dominan dengan kontribusi lebih dari 99% unit usaha nasional serta berperan penting dalam penciptaan lapangan kerja dan ketahanan ekonomi. Dengan menggunakan desain mixed methods, data diperoleh melalui survei terhadap 200 usaha mikro di sektor makanan, ritel, dan jasa, serta wawancara semi-terstruktur dengan 20 pemilik usaha. Hasil kuantitatif menunjukkan bahwa adopsi QRIS meningkatkan rata-rata penjualan sebesar 35% dalam enam bulan, dengan sektor makanan dan minuman mencatat pertumbuhan tertinggi sebesar 45%. Analisis regresi mengonfirmasi adanya hubungan positif dan signifikan antara penggunaan QRIS dan pertumbuhan pendapatan ( $p < .01$ ), sementara temuan kualitatif menyoroti peningkatan efisiensi transaksi, loyalitas pelanggan, serta daya tarik yang lebih besar bagi konsumen muda yang melek digital. Meski demikian, masih terdapat tantangan berupa keterbatasan literasi digital, infrastruktur, dan isu keamanan. Penelitian ini memberikan kontribusi empiris pada literatur inklusi keuangan digital dengan menekankan peran teknologi dalam meningkatkan daya saing usaha mikro, serta menghadirkan implikasi manajerial dan kebijakan bagi percepatan transformasi digital inklusif di negara berkembang.

**Kata Kunci:** QRIS, pembayaran digital, usaha mikro, inklusi keuangan, Indonesia

### Introduction

The evolution of payment systems has undergone remarkable transformations, beginning with barter and progressing to coins, paper money, and digital transactions. The introduction of credit cards in the mid-20th century represented a pivotal shift, enabling consumers to purchase without immediate cash (Schneider, 2018)<sup>1</sup>. With the rise of the internet, online banking and e-commerce flourished, paving the way for digital wallets and mobile applications. According to the

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<sup>1</sup> Schneider, M. (2018). The evolution of payment systems: A historical perspective. *Journal of Payments Strategy & Systems*, 12(1), 5–15.

(World Bank, 2021)<sup>2</sup>, the global digital payments market is projected to reach USD 10 trillion by 2025, underscoring the rapid transition toward cashless economies.

The widespread adoption of digital payments has been driven by increased smartphone penetration, improved internet connectivity, and consumer demand for greater convenience. By 2024, more than 2.5 billion people worldwide are expected to use digital payment platforms (Statista, 2021)<sup>3</sup>. Countries such as China and India have demonstrated rapid adoption through platforms like Alipay and Paytm. In Indonesia, the government has actively promoted digital payments to strengthen financial inclusion, encouraging broader participation in the formal financial system (Bank Indonesia, 2020)<sup>4</sup>.

Parallel to this digital transformation, micro enterprises play an indispensable role in national economies. Defined as businesses with fewer than ten employees and limited capital, they constitute the backbone of economic activity in many emerging markets (ILO, 2019)<sup>5</sup>. In Indonesia, micro enterprises account for 99% of all businesses and employ 97% of the workforce (BPS, 2021)<sup>6</sup>. Beyond providing employment, these enterprises foster entrepreneurship, innovation, and local economic resilience, serving as catalysts for poverty reduction and inclusive growth (United Nations, 2020)<sup>7</sup>.

To further accelerate digital transformation, Bank Indonesia launched the Quick Response Code Indonesian Standard (QRIS) in 2019. Designed as an interoperable QR-based payment system, QRIS simplifies transactions across various digital wallets, ensuring accessibility and security for both merchants and consumers (Bank Indonesia, 2019)<sup>8</sup>. Since its introduction, adoption has been rapid—particularly among micro enterprises in urban areas. Within two years, approximately 60% of micro enterprises in major Indonesian cities had integrated QRIS into their business operations (Ministry of Cooperatives and SMEs, 2021)<sup>9</sup>. The relatively low cost, interoperability, and ease of use have made QRIS a compelling option for small-scale entrepreneurs.

This study aims to examine the impact of QRIS adoption on micro enterprise sales. Specifically, it investigates whether the use of QRIS enhances transaction volume, expands customer reach, and increases overall revenue. The central research questions are: (1) How has QRIS adoption influenced the sales performance of micro enterprises? and (2) What benefits and challenges are perceived by micro entrepreneurs in using QRIS? Based on these questions, the study hypothesizes that: (a) QRIS adoption positively correlates with sales growth, and (b) micro enterprises utilizing QRIS attract a broader customer base compared to those relying primarily on cash transactions.

## Methods

This study applies a mixed-method design, combining quantitative and qualitative approaches to examine the impact of QRIS (Quick Response Code Indonesian Standard) on micro-enterprise

<sup>2</sup> World Bank. (2021). The global digital payments market. <https://www.worldbank.org>

<sup>3</sup> Statista. (2022). Digital payment users worldwide. <https://www.statista.com>

<sup>4</sup> Bank Indonesia. (2020). Digital payment in Indonesia: Opportunities and challenges. <https://www.bi.go.id>

<sup>5</sup> International Labour Organization. (2019). Micro, small and medium enterprises: Key to sustainable development. <https://www.ilo.org>

<sup>6</sup> BPS (Badan Pusat Statistik). (2021). Statistik usaha mikro dan kecil. <https://www.bps.go.id>

<sup>7</sup> United Nations. (2020). The role of micro enterprises in economic development. <https://www.un.org>

<sup>8</sup> Bank Indonesia. (2019). QRIS: Quick Response Code Indonesian Standard. <https://www.bi.go.id>

<sup>9</sup> Ministry of Cooperatives and SMEs. (2021). Adoption of QRIS in micro and small enterprises. [Government Report].

sales. Quantitative data capture adoption levels and sales outcomes, while qualitative data explore entrepreneurs' experiences, enabling contextual understanding (Creswell, 2014)<sup>10</sup>. The integration of both approaches enhances validity through triangulation (Johnson & Onwuegbuzie, 2004)<sup>11</sup>.

The research focuses on urban micro-enterprises in Indonesia, defined as businesses with annual sales below IDR 300 million and fewer than ten employees (Kementerian Koperasi dan UKM, 2021)<sup>12</sup>. Urban firms were chosen due to higher digital literacy and early adoption of payment innovations. Stratified random sampling across food, retail, and service sectors was employed to minimize bias and allow cross-sector comparisons (Fowler, 2014)<sup>13</sup>. A sample of 200 enterprises ensures statistical robustness.

Data were collected through structured online surveys and follow-up semi-structured interviews. Surveys measured sales, customer satisfaction, and efficiency, while interviews captured adoption drivers and barriers. All procedures adhered to ethical standards, including informed consent and confidentiality (Creswell John W & Poth, 2018)<sup>14</sup>.

Quantitative data were analyzed using descriptive and regression techniques with SPSS and R, while qualitative data underwent thematic analysis with NVivo (Braun & Clarke, 2006)<sup>15</sup>. This methodological combination provides a reliable and nuanced understanding of QRIS's effect on micro-enterprise performance.

## Results and Discussion

The adoption of the Quick Response Code Indonesian Standard (QRIS) has significantly transformed payment practices among micro enterprises in Indonesia. Statistical analysis of 100 micro enterprises revealed a 35% average sales increase within six months after adoption, with a paired t-test confirming the difference as statistically significant ( $p < .01$ ). Sectoral analysis showed the food and beverage industry achieving the highest growth (45%), followed by retail (30%) and services (25%). Faster transaction times and greater customer convenience further contributed to higher purchase frequency (Kumar & Gupta, 2020)<sup>16</sup>.

Qualitative interviews with 20 micro enterprise owners enriched these findings. While many initially expressed hesitation due to technological concerns, their experiences post-adoption were largely positive. Younger customers (ages 18–35) emerged as the primary users of QRIS, aligning with global trends in digital payment adoption (Pew Research Center, 2021)<sup>17</sup>. Owners noted that QRIS not only improved transaction efficiency but also enhanced customer satisfaction and loyalty.

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<sup>10</sup> Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage.

<sup>11</sup> Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14–26.

<sup>12</sup> Kementerian Koperasi dan UKM. (2021). *Statistik Koperasi dan Usaha Kecil Menengah Tahun 2021*. Jakarta: Kementerian Koperasi dan UKM.

<sup>13</sup> Fowler, F. J. (2014). *Survey research methods* (5th ed.). Sage.

<sup>14</sup> Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage.

<sup>15</sup> Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.

<sup>16</sup> Kumar, A., & Gupta, R. (2020). Consumer behavior in digital payments: A study of Indian consumers. *International Journal of Bank Marketing*, 38(5), 1123–1137.

<sup>17</sup> Pew Research Center. (2021). *The future of money: Digital payments and consumer behavior*. <https://www.pewresearch.org>

These findings are consistent with earlier studies showing sales increases from mobile payment adoption (Mauliansyah., 2024)<sup>18</sup> but contrast with research citing technological barriers and distrust as major impediments (Mansor et al., 2020)<sup>19</sup>. The growing penetration of smartphones and internet connectivity in Indonesia appears to be shifting this narrative.

The implications are twofold. First, for micro enterprises, QRIS adoption enhances competitiveness, particularly in attracting younger, tech-savvy consumers. It also fosters business resilience in the post-pandemic era, where contactless transactions are increasingly preferred (International Monetary Fund, 2021)<sup>20</sup>. Second, at the policy level, widespread QRIS adoption supports financial inclusion and economic growth. Policymakers and financial institutions can strengthen these outcomes by promoting digital literacy, providing training, and offering incentives such as low-interest loans for digital infrastructure upgrades.

Despite these promising results, some limitations remain. The study focused only on enterprises already using QRIS, introducing possible selection bias, and covered only the first six months post-adoption, which may not capture long-term effects. Future research should examine barriers among non-adopters, conduct longitudinal assessments of sustained sales impacts, and explore consumer behavior across diverse regions and industries.

This study contributes to filling a notable research gap by providing empirical evidence on QRIS adoption among Indonesian micro enterprises. It highlights the interplay of technological, demographic, and behavioral factors in shaping digital payment outcomes. By situating QRIS within broader discourses on digital finance and micro enterprise growth, the study underscores its potential as both a business enabler and a policy tool for inclusive economic development.

## Conclusion

The adoption of Quick Response Code Indonesian Standard (QRIS) has significantly transformed micro enterprises in Indonesia. Businesses using QRIS report sales growth of around 20% in the first year (Bank Indonesia, 2021)<sup>21</sup> and improved cash flow, with 75% of firms citing faster and more transparent transactions (Indonesian E-Commerce Association [idEA], 2022)<sup>22</sup>. QRIS also reduces operational costs, strengthens customer loyalty, and expands access to tech-savvy consumers, 60% of whom prefer cashless transactions (McKinsey, 2022)<sup>23</sup>.

Beyond efficiency, QRIS enables micro enterprises to participate in e-commerce ecosystems. For example, artisans in Bali increased online sales by 30% within six months of adoption (Bali Creative Economy Agency, 2022)<sup>24</sup>. The COVID-19 pandemic further accelerated this shift, with

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<sup>18</sup> Mauliansyah, H. Analysis Of Msme Competitive Strategies In Facing Digital Competition.

<sup>19</sup> Mansor, N., Rahim, M., & Jalil, S. (2020). Barriers to digital payment adoption in micro enterprises. *Journal of Small Business Management*, 58(3), 456–478.

<sup>20</sup> International Monetary Fund. (2021). Digital payments: A new era for financial inclusion. <https://www.imf.org>

<sup>21</sup> Bank Indonesia. (2021). The impact of QRIS on micro enterprises. Bank Indonesia. <https://www.bi.go.id>

<sup>22</sup> Indonesian E-Commerce Association (idEA). (2022). Digital payment trends in Indonesia. idEA. <https://idea.or.id>

<sup>23</sup> McKinsey & Company. (2022). Consumer behavior trends in Indonesia. McKinsey & Company. <https://www.mckinsey.com>

<sup>24</sup> Bali Creative Economy Agency. (2022). Case study: Local artisans and QRIS adoption. Bali Creative Economy. <https://bali.go.id>

80% of Indonesian consumers moving toward digital payments (Deloitte, 2022)<sup>25</sup>, indicating that cashless systems are now essential rather than optional.

However, challenges such as limited digital literacy, infrastructure gaps, and cybersecurity concerns persist. To overcome these barriers, governments, financial institutions, and fintech providers must collaborate by offering training, incentives, and affordable digital solutions. Such efforts will ensure that QRIS drives inclusive growth and empowers micro enterprises in Indonesia's digital economy.

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