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The Impact of QRIS Implementation on the Growth and Competitiveness of Small Tourism Businesses in Bali

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Abstract - The implementation of the Quick Response Code Indonesian Standard (QRIS) has emerged as a pivotal development in the digital transformation of Indonesia's payment systems. In Bali, a region heavily dependent on tourism, the adoption of QRIS has significant implications for the growth and competitiveness of small tourism-related businesses. This study investigates the extent to which QRIS has contributed to enhancing operational efficiency, market accessibility, and financial inclusion among micro, small, and medium enterprises (MSMEs) in the tourism sector. Using a mixed-methods approach combining quantitative survey data and qualitative interviews with small business owners in key tourist destinations such as Ubud, Seminyak, and Nusa Penida, this research identifies key drivers and challenges associated with QRIS usage. Findings indicate that QRIS adoption has reduced transaction costs, improved customer convenience, and enhanced business visibility among domestic and international tourists. Moreover, QRIS facilitates better financial record-keeping, which is instrumental in accessing microcredit and other forms of institutional support. Despite its benefits, challenges persist, particularly related to digital literacy, infrastructure availability, and inconsistent regulatory enforcement. The study concludes that while QRIS significantly boosts competitiveness and resilience among small tourism enterprises, its optimal impact depends on sustained digital education, government incentives, and inclusive policy frameworks. This paper contributes to the growing body of literature on digital payment systems and MSME development in emerging economies. It offers actionable recommendations for policymakers, financial institutions, and tourism stakeholders aiming to maximize the socioeconomic impact of QRIS in Indonesia and beyond.

Keywords (5 to 8 words)**:** QRIS, digital payment systems, small tourism businesses, MSMEs, financial inclusion, tourism economy, digital transformation

1. Introduction

1.1 Background of the Study

The tourism industry is one of the most vital sectors contributing to economic development in Indonesia, particularly in Bali, which has long been recognized as a premier global tourism destination. With its rich cultural heritage, unique natural beauty, and vibrant hospitality

industry, Bali plays a pivotal role in the country's service sector and foreign exchange earnings. According to the Indonesian Ministry of Tourism and Creative Economy, the tourism sector contributes approximately 4.8% to the national GDP, with Bali accounting for a substantial share of this output (BPS, 2023). Small and medium-sized tourism enterprises—ranging from homestays and local tour operators to handicraft sellers and culinary businesses—constitute the backbone of this economy, providing employment opportunities and fostering community-based development. Amid the rapid digital transformation in global commerce and finance, the integration of digital payment systems has become a critical factor in enhancing the efficiency and competitiveness of small businesses. In Indonesia, the introduction of the Quick Response Code Indonesian Standard (QRIS), initiated by Bank Indonesia in 2019, represents a significant milestone in the modernization of the national payment ecosystem. QRIS is a unified QR code payment system that standardizes digital transactions, enabling interoperability across various financial service providers and facilitating cashless payments through mobile platforms (Bank Indonesia, 2020). For micro, small, and medium enterprises (MSMEs), QRIS offers an accessible and efficient payment tool that aligns with the digitalization agenda and financial inclusion objectives set forth in the National Strategy for Financial Inclusion (SNKI). As tourism in Bali rebounds in the post-pandemic era, digital payment adoption has become increasingly relevant. The COVID-19 pandemic accelerated the demand for contactless and hygienic payment solutions, making QRIS a timely intervention for small tourism businesses striving to adapt to new consumer behaviors and health protocols. The integration of QRIS not only enables businesses to streamline transactions but also improves their visibility and trust among domestic and international travelers, many of whom now expect digital payment options as part of their travel experience.

1.2 Problem Statement

Despite the recognized benefits of QRIS, the rate of adoption and the actual impact on small tourism enterprises remain varied. Several studies highlight the challenges faced by small businesses in embracing digital technologies, including limited digital literacy, inadequate infrastructure, and reluctance to move away from cash-based systems (World Bank, 2021; G20 Indonesia, 2022). While some businesses have experienced growth and expanded customer bases through QRIS adoption, others struggle with integration or fail to see measurable benefits. These disparities raise critical questions about the real-world effectiveness of QRIS in transforming small tourism enterprises in Bali and enhancing their competitiveness in a dynamic, technology-driven market. There is a pressing need to investigate the mechanisms through which QRIS influences business performance, including its role in financial management, marketing outreach, and operational resilience. Moreover, an understanding of the challenges that inhibit QRIS adoption among small tourism players is essential for designing targeted interventions. Without empirical evidence and context-specific analysis, policy efforts to promote digital payment usage among MSMEs may remain inefficient or misaligned with ground realities.

1.3 Research Objectives

This study aims to examine the impact of QRIS implementation on the growth and competitiveness of small tourism businesses in Bali. The specific objectives of the research are:

1. To analyze the extent of QRIS adoption among small tourism enterprises in Bali.
2. To evaluate the perceived benefits and challenges associated with QRIS usage from the perspective of business owners.
3. To assess the effect of QRIS on business performance indicators such as transaction speed, customer satisfaction, and access to financial services.
4. To provide policy recommendations that can support broader and more effective QRIS adoption within the tourism sector.

By addressing these objectives, the study seeks to contribute to the ongoing discourse on digital payment systems and inclusive economic growth in developing economies.

1.4 Significance of the Study

The findings of this research carry important implications for multiple stakeholders. For policymakers and regulators, the study offers insights into the effectiveness of national digital payment strategies and the need for complementary measures such as digital literacy programs

and infrastructure development. For small business owners and tourism practitioners, the research provides practical knowledge on how digital tools like QRIS can be leveraged to enhance competitiveness, reach broader markets, and build financial resilience. Furthermore, financial institutions and fintech companies can gain a deeper understanding of user needs and preferences, enabling them to design better products and services for MSMEs. Academically, this study adds to the relatively limited but growing body of literature on the intersection of financial technology (fintech), small business development, and tourism economics in Southeast Asia. It contextualizes the digital transformation of MSMEs within the unique socio-economic fabric of Bali, offering a case-specific exploration that complements broader global studies.

1.5 Literature Review Overview

Previous literature has established that the adoption of digital payment systems contributes positively to business efficiency and market access. Studies by Karjaluoto et al. (2020) and Kim et al. (2019) highlight that mobile payment systems increase transaction speed, improve customer satisfaction, and reduce operational costs for small businesses. In developing economies, mobile payment adoption is closely tied to financial inclusion, especially for unbanked populations (Demirgüç-Kunt et al., 2022). In the context of tourism, digital payment options are increasingly seen as part of the expected service quality, influencing tourist satisfaction and repeat visits (UNWTO, 2021). However, challenges persist. A report by the Asian Development Bank (ADB, 2021) notes that MSMEs in the tourism sector often face barriers to adopting digital technologies due to capital constraints, limited awareness, and infrastructural deficits. Furthermore, while QR-based payment systems are gaining traction, their effectiveness depends on ecosystem readiness, including smartphone penetration, internet access, and regulatory support.

In Indonesia, few studies have examined the specific impact of QRIS on tourism-related MSMEs. Research by Ramadhan and Nurfitriani (2023) suggests that QRIS has improved transaction efficiency for small traders in Java, but comprehensive evaluations in tourism-heavy regions like Bali are scarce. This study fills that gap by exploring the unique economic, cultural, and technological context of Bali's tourism MSMEs.

1.6 Conceptual Framework

The conceptual framework of this study is based on three interrelated pillars:

1. **Technology Adoption**: Using Rogers' Diffusion of Innovation Theory (2003), the study explores the factors influencing the decision of small business owners to adopt QRIS, including perceived usefulness, ease of use, and compatibility with existing practices.
2. **Business Performance**: Drawing on the Balanced Scorecard approach (Kaplan & Norton, 1996), the study evaluates performance indicators such as customer satisfaction, internal processes, and financial metrics post-QRIS adoption.
3. **Competitiveness**: The research adopts Porter's (1985) model of competitive advantage to examine how QRIS enables businesses to differentiate their services, enhance customer loyalty, and respond to market dynamics.

By integrating these perspectives, the study constructs a multidimensional analysis of how digital payment systems can transform small-scale tourism enterprises.

1.7 Scope and Limitations

This research focuses on small tourism-related businesses operating in three popular tourist areas of Bali: Ubud, Seminyak, and Nusa Penida. The choice of these locations ensures coverage of diverse types of tourism experiences (cultural, beach, and eco-tourism), which helps in understanding the broader applicability of QRIS across sub-sectors. The study is limited by the availability of data and the self-reported nature of business performance metrics. Additionally, as the tourism sector is highly sensitive to external factors such as global travel restrictions, seasonal variation, and socio-political conditions, the findings should be interpreted within the context of Bali's specific tourism trends during the research period (2024–2025).

1.8 Research Questions

To guide the investigation, the study seeks to answer the following questions:

1. What is the current level of QRIS adoption among small tourism enterprises in Bali?
2. What are the primary motivations and barriers to adopting QRIS?
3. How has QRIS influenced business growth, customer satisfaction, and financial access?

4. What policy and institutional measures can enhance the adoption and impact of QRIS in the tourism MSME sector?

These questions align with the overall objective of evaluating the strategic role of QRIS in shaping the future of small tourism enterprises in Bali.

2. Method

2.1 Research Design

This study employs a mixed-methods research design, integrating both quantitative and qualitative approaches to gain a comprehensive understanding of the impact of QRIS implementation on small tourism enterprises in Bali. The rationale behind this approach lies in the complexity of the research objectives, which require both empirical measurement (quantitative) and contextual depth (qualitative). A combination of surveys and semi-structured interviews was deemed suitable for examining both the measurable outcomes and the subjective experiences associated with QRIS adoption. The study adopts a descriptive-explanatory approach, aiming not only to describe the level of QRIS adoption but also to explain how and why this adoption influences business performance and competitiveness. The mixed-methods design ensures methodological triangulation, enhancing the validity and reliability of the research findings (Creswell & Plano Clark, 2018).

2.2 Population and Sample

The population for this research consists of small and medium-sized tourism businesses operating in Bali, specifically in three key tourism areas: Ubud, Seminyak, and Nusa Penida. These areas were selected to reflect diverse types of tourism markets: cultural tourism (Ubud), coastal tourism (Seminyak), and eco-marine tourism (Nusa Penida). The definition of "small tourism businesses" in this study includes enterprises such as guesthouses, local travel agencies, tour guides, souvenir shops, food stalls, and transportation services with fewer than 20 employees and annual revenue below IDR 2.5 billion, following the classification of MSMEs by the Indonesian Ministry of Cooperatives and SMEs. A stratified random sampling technique was employed to ensure adequate representation from each tourism zone. A total of 150 businesses were surveyed (50 from each area), and 15 key informants were selected for in-depth interviews (5 per area) based on their length of business operation, prior digital payment experience, and willingness to participate.

2.3 Data Collection Techniques

2.3.1 Quantitative Data Collection

Quantitative data were collected through structured questionnaires administered to business owners or their managers. The questionnaire consisted of three main sections:

1. Demographic and Business Profile: Type of business, number of employees, years of operation, and primary customer segment (domestic vs. foreign tourists).
2. QRIS Adoption and Usage: Date of QRIS adoption, frequency of use, training received, and integration with other digital tools (e.g., accounting apps, e-wallets).
3. Business Performance Indicators: Self-reported changes in revenue, customer volume, transaction speed, customer satisfaction, and access to financial services before and after adopting QRIS.

Most items were measured using Likert-scale questions (e.g., 1 = strongly disagree, 5 = strongly agree) to capture attitudes and perceptions.

2.3.2 Qualitative Data Collection

Qualitative data were gathered through semi-structured interviews with selected business owners and local tourism stakeholders, including representatives from the Bali Tourism Board and fintech service providers. The interviews explored:

- Motivations for adopting QRIS
- Perceived benefits and limitations
- Challenges encountered during implementation
- Suggestions for improving QRIS services and support mechanisms

Each interview lasted approximately 30–45 minutes and was conducted in Bahasa Indonesia, with permission for audio recording. Interviews were later transcribed and translated into English for analysis.

2.4 Data Analysis Methods

2.4.1 Quantitative Analysis

Quantitative data from the questionnaires were coded and analyzed using SPSS version 26. The analysis involved:

- Descriptive Statistics: To summarize the demographic characteristics and QRIS usage patterns.
- Correlation Analysis: To test the relationships between QRIS adoption and business performance indicators.
- Regression Analysis: To determine the extent to which QRIS usage predicts business growth outcomes such as revenue increase and customer retention.

Reliability testing was conducted using Cronbach's Alpha, and all scales reported a value above 0.70, indicating acceptable internal consistency (Nunnally & Bernstein, 1994).

2.4.2 Qualitative Analysis

Thematic analysis was used for the interview transcripts, following Braun and Clarke's (2006) six-phase process:

1. Familiarization with the data
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the report

NVivo software was used to assist in coding and managing the qualitative data. Emerging themes were triangulated with the quantitative findings to draw comprehensive insights into the QRIS adoption experience among small tourism businesses.

2.5 Validity and Reliability

To enhance the validity of the study, the research instruments were pilot-tested on a small group of 10 business owners in Denpasar before full deployment. Feedback from this pilot helped refine unclear wording and ensure cultural relevance. In addition, data triangulation across quantitative and qualitative sources helped corroborate findings and reduce potential biases. Reliability was ensured through consistent data collection protocols, standardized instruments, and researcher training. All survey administrators and interviewers were trained in ethical data collection, sensitivity to participant privacy, and technical accuracy.

2.6 Ethical Considerations

This research was conducted in accordance with ethical research principles. Participation was voluntary, and respondents were informed of the study's purpose, potential benefits, and their right to withdraw at any time. Informed consent was obtained in writing for both survey and interview participants. Confidentiality was strictly maintained, with all personal identifiers anonymized during data entry and reporting. The study received ethical clearance from the Research Ethics Committee of a local academic institution in Bali, ensuring that it adhered to ethical guidelines for social research involving human participants.

2.7 Limitations of the Methodology

While this study aims for comprehensive coverage, certain methodological limitations are acknowledged:

- The use of self-reported data may introduce biases, such as social desirability or recall inaccuracy.
- The cross-sectional nature of the survey does not allow for longitudinal tracking of performance over time.
- The sample is limited to three regions of Bali and may not represent QRIS adoption trends in other Indonesian provinces or tourism markets.
- Due to resource constraints, the study did not include customer perspectives, which could have added another dimension to understanding the impact of QRIS on customer experience and satisfaction.

Nevertheless, these limitations are mitigated through data triangulation and careful interpretation of the findings.

3. Findings and Discussion

This section presents and interprets the empirical findings obtained through the mixed-methods approach. Quantitative data from structured surveys are presented alongside insights from qualitative interviews, enabling a comprehensive understanding of how QRIS adoption affects the growth and competitiveness of small tourism businesses in Bali.

3.1 Overview of QRIS Adoption in Bali's Tourism Sector

3.1.1 Rate of Adoption

Among the 150 businesses surveyed across Ubud, Seminyak, and Nusa Penida, 128 (85.3%) had adopted QRIS as of March 2025. The remaining 22 businesses cited reasons such as lack of awareness, technological barriers, or perceived irrelevance to their customer base. Adoption was highest in Seminyak (92%), followed by Ubud (88%) and Nusa Penida (76%).

These findings indicate a generally high level of digital payment integration, reflecting the growing normalization of QR-based transactions in Indonesia's tourism hotspots. The higher adoption rates in Seminyak and Ubud can be attributed to stronger infrastructure, higher volumes of foreign tourists, and closer proximity to urban centers with better internet and mobile payment penetration.

3.1.2 Business Characteristics and Adoption Trends

QRIS adoption was more prevalent among:

* Younger business owners (aged 25–40)
* Businesses that catered primarily to international tourists
* Enterprises with prior exposure to digital tools (e.g., e-wallets, online booking systems)

Older business owners and informal businesses with cash-only histories exhibited more resistance to QRIS adoption. Interview data reinforced this, with one café owner in Nusa Penida stating:

"I know about QRIS, but I don't feel it's necessary because my customers prefer to pay in cash."

This suggests a digital divide not only based on geography but also age, digital literacy, and customer profile.

3.2 Benefits Experienced from QRIS Usage

3.2.1 Transaction Efficiency and Customer Convenience

A majority of respondents (91%) agreed or strongly agreed that QRIS increased transaction efficiency. Customers could pay quickly using various e-wallets or mobile banking apps, reducing queue times and eliminating the need to provide change. Businesses also appreciated the interoperability of QRIS—accepting payments from all major platforms using a single code. One souvenir shop owner in Ubud shared:

"Before QRIS, I had to register with multiple providers like OVO and GoPay. Now one QR code works for all."

This streamlined approach significantly reduced administrative overhead.

3.2.2 Increase in Customer Satisfaction

Survey results show that 78% of respondents reported an increase in customer satisfaction since implementing QRIS. This was particularly notable among foreign tourists, many of whom found cashless options to be safer and more hygienic, especially during the COVID-19 pandemic.

An accommodation provider in Seminyak noted:

"Tourists often ask if we accept QR codes. When we say yes, they feel more comfortable. Some even choose us because of it."

This aligns with findings from the UNWTO (2021), which emphasize the importance of digital payments in enhancing visitor experience.

3.2.3 Financial Record-Keeping and Access to Credit

Over 60% of businesses stated that QRIS helped improve financial record accuracy. This, in turn, improved eligibility for loans and access to formal financial services. Several respondents reported that they were able to obtain microcredit for business expansion due to more transparent transaction histories enabled by QRIS.

An interviewee from Ubud stated:

"Bank officers used to reject my loan application because I didn't have bank statements. With QRIS, I can show them daily transaction records."

This reinforces QRIS's role in promoting financial inclusion among micro-entrepreneurs, echoing observations by Demirgüç-Kunt et al. (2022) on fintech-facilitated access to credit.

3.3.1 Digital and Financial Literacy Gaps

One of the most persistent barriers to widespread QRIS adoption was the lack of digital literacy, especially among older entrepreneurs and those in rural or semi-rural locations like Nusa Penida. Nearly 40% of non-users cited difficulties in understanding or operating the technology.

A handicraft seller in Nusa Penida commented:

"I am afraid I will press the wrong button or lose my money. I prefer cash because I know how it works."

This gap highlights the need for more inclusive training and digital education programs targeting underserved business owners.

3.3.2 Infrastructure Limitations

Although Bali enjoys relatively good connectivity, infrastructure challenges remain in more remote or less developed areas. Several respondents from Nusa Penida and peripheral parts of Ubud reported inconsistent internet coverage or smartphone malfunctions that hindered smooth QRIS operation. Approximately 31% of surveyed businesses cited technical interruptions, such as slow connections or app crashes, as obstacles to reliable digital payments. This echoes the findings of the Asian Development Bank (2021), which stresses that infrastructure reliability is crucial for fintech adoption in developing countries.

3.3.3 Customer Preference for Cash

Despite growing digital awareness, some business owners observed that a portion of their clientele, especially older domestic tourists, still preferred paying in cash. In particular, cash was favored for low-value purchases or in areas where ATM access remained convenient.

As one warung owner explained:

"Some customers don't trust mobile payments. They ask if I have a QR code, but then they just pay cash anyway."

This reflects a transitional phase in Indonesia's financial ecosystem, where digital and cash-based economies coexist.

3.4 Impact on Business Growth and Competitiveness

3.4.1 Revenue and Customer Growth

Of the 128 QRIS adopters, 93 businesses (72.6%) reported increased revenues since adopting QRIS. Regression analysis revealed a statistically significant positive relationship ($p < 0.01$) between QRIS usage frequency and revenue growth. Businesses that actively promoted QRIS as a payment option also reported higher customer acquisition rates.

Several participants stated that QRIS gave them a competitive edge, particularly during peak tourist seasons. A café owner in Seminyak said:

"When the tourist area gets crowded, customers don't want to wait for change or card payments. With QRIS, it's fast. We serve more people in less time."

3.4.2 Brand Image and Market Reach

QRIS also contributed to an improved brand image. Customers perceived businesses with QR codes as modern, trustworthy, and customer-centric. Businesses that incorporated QRIS into their marketing strategy (e.g., displaying QRIS signage prominently or advertising "cashless-friendly" services on social media) were more likely to attract tech-savvy tourists. Moreover, QRIS compatibility with digital wallets facilitated participation in online marketplaces and delivery platforms. This opened new sales channels, especially during the pandemic when foot traffic declined.

3.4.3 Operational Resilience

QRIS enhanced operational resilience by minimizing dependence on cash flow. Businesses faced fewer risks from theft or counterfeit money, and transaction records simplified tax compliance. During emergencies such as Bali's temporary travel restrictions in early 2021–2022, some businesses survived by pivoting to online orders and QRIS-based delivery transactions.This

underscores QRIS's potential as a strategic asset for MSMEs in unpredictable economic environments.

3.5 Discussion: Implications for Digital Transformation and Policy

3.5.1 QRIS as a Driver of Digital Inclusion

The results affirm that QRIS is a practical and scalable solution for digitizing small tourism businesses. It requires minimal investment, is supported by most banks and fintech providers, and is increasingly accepted by customers. Its success demonstrates how standardization and interoperability can catalyze digital adoption at scale, especially in fragmented MSME sectors. This aligns with Indonesia's National Strategy for Financial Inclusion (SNKI), which prioritizes MSME empowerment through accessible financial technologies. QRIS serves not only as a payment tool but also as an entry point to broader digital services such as savings, insurance, and credit.

3.5.2 Role of Government and Institutional Support

Despite its benefits, QRIS adoption cannot occur in isolation. The research highlights the need for complementary support, including:

- Training programs on digital and financial literacy
- Mobile infrastructure investment in underserved areas
- Incentives for early adopters (e.g., lower transaction fees or marketing support)

Public-private partnerships are essential to scaling QRIS usage. For instance, local tourism boards can integrate QRIS education into license renewal procedures or promotional campaigns.

3.5.3 Reframing Customer Expectations

As digital payments become standard in urban areas, it is essential to normalize QRIS among tourists and the general public. Promoting the benefits of cashless transactions—speed, security, convenience—can influence both merchants and consumers. Government initiatives during the pandemic, such as cashless food distribution or stimulus transfers via QRIS, have laid a strong foundation for this behavioral shift. Moreover, QRIS has potential to integrate with broader sustainable tourism strategies. By minimizing cash logistics, it reduces waste and administrative burden. It can also promote traceability and formalization, which are key for monitoring tourism's economic footprint.

3.6 Comparative Analysis with Other Regions and Countries

When compared with QR code payment systems in other developing countries (e.g., India's BharatQR, China's Alipay/WeChat Pay, and Malaysia's DuitNow), Indonesia's QRIS shows promising uptake but still lags in rural penetration and ecosystem support. In China, for example, mobile QR payment has become ubiquitous even among street vendors due to early infrastructure investment and user education (Zhou et al., 2021).

Indonesia can learn from these models by prioritizing offline QRIS functionality, offline wallet storage, and simplified interfaces for low-literacy users. Future enhancements may also include cross-border QRIS compatibility, as seen in ASEAN initiatives to integrate digital payment systems regionally.

Summary of Key Findings

Category	Key Findings
QRIS Adoption	85.3% of businesses use QRIS; highest in Seminyak
Transaction Efficiency	91% report faster transactions and reduced admin load
Customer Satisfaction	78% observe increased satisfaction, especially among tourists
Business Growth	72.6% report revenue growth; strong link with frequent QRIS usage
Challenges	Digital literacy, infrastructure, customer preference for cash
Strategic Value	Enhances competitiveness, resilience, access to credit

4. Conclusion and Recommendations

4.1 General Summary

This study set out to examine the impact of the Quick Response Code Indonesian Standard (QRIS) on the growth and competitiveness of small tourism businesses in Bali. By integrating

quantitative and qualitative data from 150 businesses across three diverse tourism regions—Ubud, Seminyak, and Nusa Penida—the research has revealed a nuanced understanding of how QRIS is transforming the operational landscape for micro, small, and medium enterprises (MSMEs) in the tourism sector. The findings confirm that QRIS has emerged as a valuable tool in promoting digital payment adoption among small tourism operators. The system's simplicity, interoperability, and support from a national financial infrastructure have enabled businesses with limited technological resources to adopt cashless transactions, often for the first time. Across the sample, QRIS users reported higher transaction efficiency, enhanced customer satisfaction, and improved access to financial services. These benefits, in turn, contributed to revenue growth, brand enhancement, and operational resilience, positioning QRIS as both a transactional tool and a strategic asset. However, the research also highlights several persistent challenges. A lack of digital literacy among certain business owners—particularly older or rural entrepreneurs—remains a significant barrier. Inadequate infrastructure in remote locations, resistance from cash-preferred customers, and concerns over data privacy and technical reliability also limit the full potential of QRIS. These factors underscore that while the technological infrastructure for digital payments is in place, the human and institutional frameworks supporting it still require development.

4.2 Theoretical Implications

This study contributes to the theoretical discourse in several key areas. Firstly, by applying Rogers' Diffusion of Innovation theory (2003), the findings show how relative advantage, compatibility, and ease of use significantly influence QRIS adoption rates. Businesses that perceived QRIS as beneficial and aligned with their existing workflows were more likely to adopt it. The model's categorization of adopters (innovators, early adopters, majority, and laggards) was reflected in the different adoption rates observed across regions and demographic groups. Secondly, the study draws on Kaplan and Norton's Balanced Scorecard approach (1996) to assess performance across financial, customer, and operational dimensions. It demonstrates that QRIS positively impacts these areas, especially when integrated with broader digital business strategies. Finally, using Porter's (1985) framework of competitive advantage, QRIS-enabled businesses demonstrated enhanced differentiation, customer responsiveness, and cost efficiency, all of which contribute to a more competitive market position. In the context of Bali's tourism economy—characterized by high competition and fluctuating demand—these advantages are not merely incremental but critical to survival and growth.

4.3 Policy Implications

The findings offer several important implications for policymakers, regulators, and institutional stakeholders aiming to support MSME growth and digital transformation.

4.3.1 Strengthening Digital and Financial Literacy

One of the most critical gaps revealed by this study is the uneven distribution of digital skills among business owners. Government institutions, NGOs, and private sector actors (e.g., banks and fintech companies) must collaborate to offer targeted training programs, especially in rural or underserved areas like Nusa Penida. These programs should be delivered in local languages, using culturally relevant examples and simplified content to maximize reach and effectiveness. Integrating financial education into vocational tourism training and licensing procedures could also help ensure that future entrepreneurs are equipped with the tools needed to navigate an increasingly digital economy.

4.3.2 Investing in Digital Infrastructure

While Bali's major urban areas enjoy good internet coverage, more remote tourism destinations suffer from unreliable connectivity, which impedes QRIS operation. Public investment in internet infrastructure, especially in areas with high tourism potential, is essential to ensure inclusivity and system reliability. Complementary policies could also incentivize telecom providers to extend coverage to marginalized regions through subsidies or public-private partnerships.

4.3.3 Providing Incentives for QRIS Adoption

While QRIS is free to register and use, businesses may still hesitate due to perceived risks or unfamiliarity. To accelerate adoption, policymakers could consider offering tax rebates, transaction fee waivers, or marketing support to early adopters within the MSME tourism

segment. These incentives could be especially beneficial when targeted at low-income or high-potential entrepreneurs. Additionally, regional tourism boards could incorporate QRIS promotion into tourism development campaigns, positioning it as a hallmark of modern, customer-oriented business practice.

4.3.4 Ensuring Consumer Awareness

Efforts to promote QRIS must also target consumers. If tourists—both domestic and international—are educated on the availability and safety of QRIS, they will be more likely to use it, thereby encouraging businesses to offer it. Tourist information centers, airline and hotel partners, and mobile banking apps could all play a role in normalizing QRIS as part of the standard tourist experience in Bali. Promotional campaigns that associate QRIS with hygiene (post-pandemic), convenience, and speed could help shift perceptions and behavior among hesitant users.

4.4 Recommendations for Business Owners and Industry Stakeholders

For small tourism business owners, the message is clear: QRIS is not just a payment tool—it is a platform for growth. By integrating QRIS into broader digital strategies, such as e-commerce, customer loyalty programs, and online marketing, businesses can amplify its benefits. Owners are encouraged to actively seek training, experiment with value-added features, and track digital transaction data to inform business decisions. Industry associations and tourism cooperatives can also play a vital role in this process by creating forums for knowledge exchange, peer support, and collective bargaining with financial service providers. By leveraging the collective voice of MSMEs, they can push for more responsive policies and better service provision.

4.5 Limitations and Suggestions for Future Research

While this study provides rich insights, it is not without limitations. The reliance on self-reported data may introduce bias or inaccuracies in assessing business performance. Future studies could integrate QRIS transaction data from financial institutions to cross-verify reported outcomes. Additionally, this research is geographically confined to Bali. Comparative studies involving other Indonesian provinces or countries with similar digital payment initiatives (e.g., Malaysia, India, Thailand) could enrich the discourse and offer best practice models. Another avenue for future research is exploring the customer perspective: how do tourists perceive QRIS? What are their preferences and trust levels? Understanding the demand side will be critical in designing balanced interventions that promote both supply and adoption.

4.6 Final Reflections

The implementation of QRIS in Bali's tourism sector is a microcosm of Indonesia's broader digital transformation journey. In a landscape dominated by micro and small enterprises, digital payment systems such as QRIS are proving to be powerful equalizers—lowering barriers, democratizing financial access, and enabling businesses to participate more actively in the modern economy. However, digital inclusion is not merely about access to technology. It is also about the capacity to use it meaningfully and sustainably. This study emphasizes that the success of QRIS, and of digital transformation at large, depends not only on technological availability but also on education, infrastructure, incentives, and trust. For Bali's small tourism businesses, embracing QRIS is no longer optional—it is essential. And for policymakers, ensuring the success of such initiatives means going beyond infrastructure to build the human and institutional ecosystems that can support a thriving, inclusive digital economy.

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