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QRIS IN INDONESIA: A COMPREHENSIVE LITERATURE REVIEW ON ADOPTION, CHALLENGES, AND OPPORTUNITIES

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ABSTRACT

Indonesia grapples with multifaceted challenges in the adoption of digital payment systems, marked by regulatory ambiguities, inadequate financial literacy, and organizational intricacies. Despite strides in technological innovation, the nation's readiness for widespread digital payment adoption remains uncertain. To address these complexities, concerted efforts are imperative. Enhancing financial literacy among the populace emerges as a foundational step, empowering individuals to navigate the digital financial ecosystem effectively. Moreover, fostering collaborative partnerships between regulatory bodies, financial institutions, and private enterprises is crucial to surmounting regulatory hurdles and fostering innovation. Recommendations include refining regulatory frameworks to provide clarity and flexibility, instituting comprehensive financial education programs, and incentivizing private sector involvement in digital payment initiatives. By embracing these strategies, Indonesia can overcome the complexities of digital payment adoption, unlocking the potential for inclusive economic growth and financial empowerment across diverse societal segments.

Keywords: *QRIS, digital payment, financial literacy, regulatory challenges, technological innovation, collaboration*

INTRODUCTION

In recent years, the financial landscape has witnessed a profound transformation fueled by the emergence of financial technology (fintech). Fintech, characterized by its innovative approach to financial services delivery, has fundamentally altered traditional banking models, ushering in a new era of digital finance (Michael et al., 2022). Enabled by advancements in internet technologies and mobile networks, fintech has revolutionized the accessibility and efficiency of financial transactions, offering unparalleled convenience to consumers and businesses alike (Gai et al., 2018).

Furthermore, fintech has emerged as a potent catalyst for financial inclusion and economic development, leveraging new products, services, and technologies to enhance the stability and efficiency of financial systems (Hui et al., 2019). Recognizing its transformative potential, institutions such as the World Bank have championed fintech as a driver of financial development and economic growth

(Telukdarie & Mungar, 2023). Research underscores fintech's capacity to drive profitability through increased sales volumes and reduced transaction costs, while also fostering positive perceptions among SMEs and startups (Sutrisno et al., 2022; Ghazali & Yasuoka, 2018).

However, the rapid proliferation of fintech presents challenges alongside opportunities. Concerns persist regarding potential disruptions to labor markets and exacerbation of socioeconomic inequalities (Kumar, 2016). While fintech holds promise for wealthier individuals who can invest in its advancements, there are apprehensions about its accessibility and impact on marginalized communities. Nevertheless, there remains optimism regarding fintech's potential to empower microentrepreneurs and drive economic inclusion in countries like Indonesia and Malaysia (Ascarya, 2020).

The Quick Response Code Indonesian Standard (QRIS) represents a significant milestone in Indonesia's journey toward a digital economy. QRIS offers a streamlined payment solution, allowing transactions from various funding sources, including bank accounts, e-wallets, or debit cards, with minimal hassle (Levitin, 2016; Sutanto, 2019).

As the digital saga of QRIS and the Gacoan dilemma unfolds, it beckons us to delve deeper into the intricate web of challenges and opportunities that define the microentrepreneurial landscape. It is a landscape marked by paradox and promise, where the allure of digital innovation is tempered by the harsh realities of economic exigency.

Source: Twitter @banyusadewa

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However, recent developments have highlighted challenges in QRIS adoption and usage, particularly concerning transaction settlement efficiency and merchant acceptance practices. Instances of select outlets, including Mie Gacoan restaurants, rejecting QRIS payments from specific banks have sparked inquiries among consumers and stakeholders (Lam et al., 2020; Koumpan et al., 2022).

The underlying issues appear rooted in delays in fund settlements following QRIS transactions, particularly affecting merchants reliant on timely cash flows (Lam et al., 2020; Koumpan et al., 2022). Moreover, uncertainties surrounding transaction settlement processes and associated Merchant Discount Rates (MDR) have emerged as significant concerns impacting merchant viability (Lam et al., 2020; Koumpan et al., 2022).

In the crucible of these challenges lies an invitation, a summons to the amphitheater of collaboration, where payment service providers, banks, and merchants converge to compose a symphony of resilience and innovation. it is crucial to explore the multifaceted landscape surrounding the adoption of the Quick Response Code Indonesian Standard (QRIS) in Indonesia. This digital payment solution, while heralding a new era of convenience and efficiency, is not without its challenges. Delays in transaction settlements, uncertainties in merchant acceptance practices, and opacity surrounding Merchant Discount Rates (MDR) underscore the complexities inherent in QRIS adoption. However, amidst these challenges lie opportunities for economic advancement and financial inclusion. By addressing these hurdles and harnessing the potential of QRIS technology, Indonesia can navigate towards a more digitally inclusive future, empowering microentrepreneurs and fostering economic growth across the archipelago.

THE IMPACT OF REDUCED FEES ON MERCHANT IN DIGITAL PAYMENT SYSTEMS

The adoption of digital payment methods, such as Quick Response Indonesian Standard (QRIS) and digital wallets like ApplePay and Android Pay, has undeniably transformed the landscape of financial transactions. While these digital innovations offer unparalleled convenience and integration benefits, they also introduce a myriad of considerations for merchants, particularly concerning costs and risks.

One of the primary concerns associated with digital payments is the imposition of Merchant Discount Rates (MDR), which can vary based on the payment method and transaction value. With the recent introduction of a 0.3% MDR for QRIS transactions in Indonesia (Indraini, 2023), merchants have been prompted to reassess the economic implications of accepting digital payments. However, despite this nominal fee, many merchants, like Agung and Susi, acknowledge the overall benefits of QRIS, emphasizing its role in streamlining transactions and enhancing customer experience.

The impact of reduced fees on merchants in digital payment systems is a multifaceted issue that intersects with broader themes of financial inclusion, technological innovation, and economic development. As digital payment methods like Quick Response Indonesian Standard (QRIS) and digital wallets gain traction, understanding the implications of fee structures for merchants becomes increasingly critical.

Reducing fees in digital payment systems can serve as a catalyst for enhancing financial inclusion, particularly in developing countries like Indonesia. The National Financial Literacy Survey conducted by the Otoritas Jasa Keuangan (OJK) in 2019 revealed modest improvements in financial literacy and inclusion indices (Indraini, 2023). However, disparities persist, highlighting the need for concerted efforts to promote awareness and access to financial services, especially among marginalized communities.

The advent of financial technology, or fintech, has emerged as a transformative force in the global financial landscape, offering unprecedented opportunities for enhancing financial inclusion (Lee and Shin, 2018; Telukdarie and Mungar, 2023). Fintech innovations have democratized access to financial services, empowering underserved populations through digital platforms and mobile applications. However, it is essential to address disparities in technological access, as unequal digital skills and infrastructure can exacerbate socioeconomic inequalities (Van Deursen and Van Dijk, 2010; Michael et al., 2022).

Reduced fees in digital payment systems can incentivize merchant adoption, driving broader acceptance and usage among consumers. The recent introduction of a 0.3% MDR for QRIS transactions in Indonesia (Indraini, 2023) prompts merchants to reassess the economic implications of accepting digital payments. While digital wallets like ApplePay and Android Pay offer convenience, they may incur higher costs for merchants by redirecting flows of consumer data to financial institutions (Levitin, 2016). Moreover, disparities in transaction fees between countries underscore the need for a nuanced understanding of cost structures and their impact on merchants' bottom line (Bidois, 2019).

In light of these challenges, stakeholders must adopt a collaborative approach to address the multifaceted issues surrounding digital payments. Payment service providers, banks, regulatory bodies, and merchants must work together to strike a balance between innovation and economic viability. Initiatives aimed at enhancing transparency, reducing transaction costs, and mitigating fraud risks can alleviate the financial burdens faced by merchants while ensuring the growth and sustainability of digital payment ecosystems.

REVENUE : Jurnal Manajemen Bisnis Islam
Volume X, No X (20XX)
Doi : 10.24042/revenue.v5i1.22760
Page : 91-102

FRAUD AND SECURITY CHALLENGES IN QRIS ENVIRONMENT

Fraudsters are starting to use QRIS. (Screenshot Instagram/(@redasamudera.id)

The discussion surrounding the vulnerability of digital payment systems to fraud underscores the intricate interplay between technological advancements, regulatory frameworks, and security measures. As elucidated by Jain et al. (2021), fraudulent activities perpetrated by agents, customers, and fraudsters pose significant risks to merchants, exposing them to vulnerabilities related to access, identity, finance, and information. The pervasiveness of digital payment systems further exacerbates these risks, as merchants face additional liabilities such as patent infringement and heightened fraud exposure (Jain et al., 2021).

Despite the pervasive nature of digital payment fraud, concerted efforts have been made to mitigate these risks. Initiatives such as AI-powered fraud detection systems and real-time transaction monitoring, as highlighted by Rani and Mittal (2023), represent proactive measures aimed at identifying and preventing fraudulent activities in digital transactions. Moreover, legislative measures implemented in countries like Russia and China, as outlined by Sergeevaa et al. (2024), signal a recognition of the need to address fraud committed using digital payment platforms at a regulatory level.

However, the persistence of digital payment fraud underscores the ongoing challenges faced by merchants and regulatory authorities. The evolving nature of fraudulent tactics necessitates continuous innovation in security measures to effectively combat emerging threats. Furthermore, the dynamic landscape of digital transactions requires a holistic approach that encompasses technological innovation, regulatory enforcement, and stakeholder collaboration to safeguard the integrity of digital payment systems.

In Indonesia, the emergence of the Quick Response Code Indonesian Standard (QRIS) as a dominant payment method has reshaped the nation's financial landscape, offering unprecedented convenience and accessibility. Yet, recent incidents of QRIS misuse for online gambling activities have raised concerns regarding the security and integrity of digital payment systems within the Indonesian context. Member of Parliament Kamrussamad's call for Bank Indonesia to take proactive measures underscores the imperative of regulatory oversight and consumer protection in safeguarding against digital payment fraud (Ayyubi & Fitriani, 2023).

Collaboration among financial regulators, law enforcement agencies, and religious institutions holds particular significance in addressing digital payment fraud within the Indonesian context. Engaging religious leaders and organizations in educating the public about QRIS usage aligns with Indonesia's cultural norms and can enhance public awareness, thereby mitigating the risk of exploitation for illicit purposes (Ayyubi & Fitriani, 2023).

Nevertheless, navigating the complex terrain of digital payment security in Indonesia requires a multifaceted approach that integrates technological innovations, regulatory reforms, and stakeholder collaboration. The preservation of trust and confidence in digital payment systems hinges on the implementation of robust security measures tailored to Indonesia's socio-economic dynamics, ensuring a resilient and inclusive digital future for all stakeholders. Through collective efforts and ongoing innovation, Indonesia can navigate the challenges posed by digital payment fraud and foster a safer, more resilient digital ecosystem.

IT SHOULD BE EASY: SIMPLIFYING COMPLEXITY

in recent years, the global financial landscape has undergone a seismic shift catalyzed by the rise of financial technology (fintech). Fintech, with its innovative approach to delivering financial services, has upended traditional banking models, ushering in an era defined by digital finance (Michael et al., 2022). Enabled by advancements in internet technologies and mobile networks, fintech has revolutionized the accessibility and efficiency of financial transactions, offering unparalleled convenience to consumers and businesses alike (Gai et al., 2018). Its transformative potential extends beyond mere convenience, serving as a potent force for financial inclusion and economic development.

REVENUE : Jurnal Manajemen Bisnis Islam
Volume X, No X (20XX)
Doi : 10.24042/revenue.v5i1.22760
Page : 91-102

The Reality of Multiple Codes in a Single Merchant

In Indonesia, the advent of digital payments has been a game-changer, particularly with the widespread adoption of the Quick Response Code Indonesian Standard (QRIS). QRIS represents a significant milestone in Indonesia's journey toward a cashless economy, promising streamlined payment solutions that transcend traditional boundaries. However, recent observations have unveiled a curious phenomenon: the proliferation of multiple QRIS codes within single establishments, a far cry from the envisioned simplicity and uniformity (Arini, 2023). Netizens have taken to social media platforms to express bewilderment and frustration over the prevalence of disparate QRIS codes, underscoring the urgent need for standardization and clarity in QRIS implementation.

Amidst these discussions, Trianto et al., (2023) sheds light on the behavioral intentions associated with fintech adoption among microenterprises in Indonesia and Malaysia. Employing the Unified Theory of Acceptance and Use of Technology (UTAUT) framework, scholars have identified social influence and government support as pivotal determinants shaping e-payment adoption among microenterprises (Bommer et al., 2022). These findings underscore the critical role of regulatory frameworks and supportive policies in facilitating digital payment uptake, particularly among small-scale entrepreneurs operating on the fringes of the formal financial sector.

From a regulatory standpoint, policymakers are urged to craft policies that incentivize and support microentrepreneurs in embracing digital payment technologies. However, the road to widespread adoption is fraught with challenges, ranging from infrastructural limitations to socioeconomic disparities. In this context, the importance of social influence cannot be overstated, with networks and public figures serving as conduits for disseminating information and promoting cashless transactions (Aji et al., 2021).

These insights underscore the multifaceted nature of the digital payment landscape, characterized by both promise and complexity. As Indonesia and

Malaysia navigate the intricacies of fintech adoption, stakeholders must work in concert to address barriers, foster inclusivity, and realize the transformative potential of digital finance. By leveraging technology, regulatory frameworks, and social networks, these nations can chart a course toward a more inclusive and resilient financial future for all.

CONCLUSION

the journey towards widespread adoption of digital payments in Indonesia is fraught with complexity and uncertainty. While the push for digital transformation is evident, the nation grapples with profound challenges that hinder its smooth transition. The reluctance of some segments of society reflects a broader resistance to change, highlighting the need for comprehensive strategies to overcome cultural and behavioral barriers.

Moreover, the regulatory landscape remains fragmented and ill-prepared, exacerbating confusion among financial institutions, merchants, and consumers. This regulatory ambiguity not only stifles innovation but also exposes stakeholders to heightened risks and vulnerabilities, undermining trust in digital payment systems.

Furthermore, Indonesia's low levels of financial literacy exacerbate the susceptibility to fraud and exploitation in the digital realm. Without adequate education and awareness initiatives, individuals remain ill-equipped to navigate the complexities of digital transactions, perpetuating a cycle of mistrust and apprehension.

However, amidst these challenges lies an opportunity for growth and resilience. By embracing a culture of experiential learning and iterative adaptation, Indonesia can harness the power of trial and error to drive meaningful progress in digital payment adoption. Through targeted educational campaigns and capacity-building initiatives, the nation can empower its citizens to make informed financial decisions and safeguard themselves against fraud and exploitation.

In light of these observations, it is imperative for Indonesia to chart a strategic course forward. Regulatory authorities must prioritize the development of robust frameworks that promote innovation while safeguarding the interests of all stakeholders. Collaborative efforts between the public and private sectors are essential to bridge existing gaps in knowledge and infrastructure, fostering an ecosystem conducive to sustainable digital payment adoption.

Recommendations

As we navigate the intricate landscape of digital payment adoption in Indonesia, it becomes apparent that a multifaceted approach is essential to address the complex challenges at hand. Here are several recommendations tailored to steer Indonesia towards a more seamless and secure digital payment ecosystem:

1. **Enhance Financial Literacy**: Picture this—a nationwide campaign aimed at empowering Indonesians with the knowledge and skills to navigate the digital financial landscape confidently. By leveraging engaging educational materials, workshops, and community outreach programs, we can equip individuals with the tools they need to make informed financial decisions in the digital age.
2. **Strengthen Regulatory Frameworks**: Imagine a regulatory environment characterized by clarity, coherence, and proactive oversight. By collaborating with industry stakeholders and leveraging international best practices, regulatory authorities can develop robust frameworks that provide clear guidance while fostering innovation and consumer protection.
3. **Foster Collaboration**: Envision a collaborative ecosystem where government agencies, financial institutions, and technology providers work hand in hand to drive digital payment innovation. Through public-private partnerships and cross-sectoral collaborations, we can streamline regulatory processes, address interoperability challenges, and accelerate the adoption of cutting-edge digital payment solutions.
4. **Invest in Infrastructure**: Picture an Indonesia where every citizen, regardless of location, enjoys seamless access to digital payment infrastructure. By investing in digital infrastructure and technology capabilities, particularly in remote and underserved areas, we can ensure that all Indonesians have the tools they need to participate in the digital economy securely and efficiently.
5. **Promote Innovation**: Imagine a vibrant ecosystem that nurtures innovation and entrepreneurship in digital finance. By providing incentives, funding, and regulatory support for startups and fintech companies, we can catalyze the development of innovative digital payment solutions tailored to the unique needs and preferences of Indonesian consumers.

By embracing these recommendations and fostering a culture of collaboration, innovation, and inclusivity, Indonesia can overcome its current challenges and unlock the full potential of digital payments. Together, we can pave the way for a future where digital finance empowers individuals, drives economic growth, and fosters financial inclusion for all Indonesians

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Doi : 10.24042/revenue.v5i1.22760
Page : 91-102

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