Brilliance
Research of Artificial Intelligence

E-ISSN : 2807-9035
Volume 4, Number 2, November 2024
https://doi.org/10.47709/brilliance.v4i2.4928

Enhancing Transaction Smoothness with QRIS Technology: The Role of DIGI by Bank BJB in Optimizing Customer Experience at the Banjar Branch

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open access

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Article History:
Submitted: 07-11-2024
Accepted: 19-11-2024
Published: 30-11-2024

Keywords:
QRIS; DIGI bank bjb; Digital transaction flow; Customer satisfaction.

ABSTRACT

The implementation of the Quick Response Code Indonesian Standard (QRIS) in the DIGI by bank bjb application faces challenges in enhancing the transaction flow for customers at the Banjar Branch. The primary issue is the demand for ease, speed, and efficiency in digital transactions, while aspects such as promotions and QRIS scanning capability across various merchants remain suboptimal. This study aims to examine the impact of QRIS usage within the DIGI application on the transaction flow for bank bjb customers. A quantitative research method with an explanatory survey approach was employed, involving 100 respondents who are bank bjb customers in the Banjar area. Data was collected using a Likert-scale questionnaire and analyzed using simple linear regression. The results indicate a significant positive influence of QRIS usage on transaction flow, with a t-value that demonstrates a strong correlation. The average customer satisfaction score indicated a "Very Good" criterion. These findings imply that the QRIS feature in the DIGI by bank bjb application can enhance customer transaction experiences; however, the bank needs to improve promotional features and expand QRIS scanning capabilities to further increase customer satisfaction and the competitiveness of its digital services.

INTRODUCTION

The adoption of technology in banking, especially in digital transaction services, continues to grow rapidly in the digitalization era (Dz., 2018). This is driven by the need to provide convenience and speed for customers in transactions and to build stronger long-term relationships with customers (Tirtawijaya & Wagiman, 2023). In this era, innovations such as QRIS become relevant as they facilitate transaction processes more efficiently and securely. QRIS is not just a new technology but also a strategy to create seamless transactions for customers amid the increasing digital trend (Ferozi Ramdana Irsyad et al., 2024).

Ease and security are essential characteristics in customer transaction behavior in the globalization era (Tio & Budiman, 2021). With the rise in digital transaction users, including e-commerce and banking services, the demand for more practical technology such as QRIS has surged. According to Rumahmedia (2022), digital transactions via QRIS have increased significantly from 2017 to 2023, with an average growth rate of 15% per year. In 2024, QRIS users are expected to increase by about 5% to reach 189.6 million people. However, despite the expanding usage, customer dissatisfaction remains concerning digital transaction processes. Factors such as ease of access, speed, and transaction costs are often primary concerns for customers (Sera Fauzela et al., 2023)..

This study focuses on issues related to QRIS usage in bank bjb. The table below compares transaction volume, frequency, and fee-based income from QRIS transactions across various bank bjb Banjar branches during 2023.

Figure 1. QRIS Transaction Volume Data Chart
Source: QRIS Transaction Volume Data at Bank BJB Banjar Branch, 2023

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The data on QRIS transactions across various bank bjb branches in Priangan Timur in 2023 show that QRIS usage in the DIGI by bank bjb application supports transaction smoothness in multiple regions, with high adoption rates in Tasikmalaya City. This indicates that the transaction smoothness factor provided by QRIS significantly impacts customer satisfaction and the bank's profitability, highlighting the importance of optimizing QRIS services to enhance transaction quality for customers.

The transaction data of QRIS in bank bjb branches across Priangan Timur show substantial transaction volumes and frequencies, especially in Tasikmalaya City, while significant variations or fluctuations exist among other regions. Garut Regency, for instance, records a transaction volume of IDR 714,875,924, though its transaction frequency remains lower compared to Tasikmalaya City. Similarly, the fee-based income generated by each branch does not always align with the recorded transaction volume. These fluctuations indicate differing levels of QRIS adoption and customer satisfaction with the QRIS service across regions. Therefore, further research is necessary to understand the factors affecting these differences and determine efforts to optimize QRIS services that can improve transaction consistency and smoothness for customers in all areas (Iqbal & Isroq Urrahmah, 2021)..

The application of QRIS in the DIGI by bank bjb application is expected to provide customers with a smoother transaction experience. In this context, previous studies show that customer dissatisfaction often arises from service speed constraints, application complexity, and a lack of information regarding new technologies. Warisno (2023) revealed that QRIS usage significantly facilitates cashless transactions, especially for small, medium, and micro-business owners (MSMEs), underscoring QRIS's role in supporting efficient transactions (Mukhtisar et al., 2023). However, this study focused on MSMEs and did not specifically examine banking customers.

Other studies have highlighted the importance of QRIS in banking and MSME transactions, but none specifically explored its impact on transaction smoothness at bank bjb through the DIGI application. QRIS implementation facilitates transactions among MSMEs in Bali, although technology adoption remains limited (Alicia et al., 2024). Furthermore, a study by Siti Aisyah et al. (2023) indicated that some MSMEs in West Binjai are still disinterested in QRIS, viewing cash transactions as simpler (Mustagfiroh et al., 2024)..

QRIS also plays an essential role in addressing customer complaints related to the speed and convenience of digital services (Alifia et al., 2024). One innovative solution that banks can implement is developing QRIS-based services, where customers can transact more quickly and easily. This is supported by recent studies showing that factors such as convenience, ease of use, and security significantly impact customer satisfaction in digital banking transactions (Sera Fauzela et al., 2023). However, even with technologies like QRIS implemented, challenges remain regarding customer dissatisfaction, which need to be understood and addressed to improve transaction smoothness for customers (Fidat et al., 2023).

The problem statement in this study focuses on analyzing how QRIS usage in the DIGI by bank bjb application affects transaction smoothness for bank bjb customers. The study aims to evaluate how QRIS can enhance customer transaction experiences and identify areas needing improvement to elevate bank service quality (Perdana & Sinarwati, 2022). The study findings are expected to provide recommendations for bank bjb in optimizing QRIS implementation to better align with customer needs. Additionally, this research aims to contribute to the literature on QRIS usage in the banking sector and support the development of digital strategies to advance the banking industry in Indonesia.

LITERATURE REVIEW

Bank Marketing Strategies

Marketing strategies in banking play a crucial role in maintaining stability, attracting and retaining funds, and increasing the customer base. Marketing also functions as an effort by banks to address various challenges, such as competition with new banks and the rapidly growing demand for technological innovation. There five main marketing strategies can be employed by banks (Ferozi Ramdana Irsyad et al., 2024). First, the market penetration strategy, an effort to expand customer numbers and quality in the existing market through active promotion and distribution (Lukitaningsih, 2013). Second, product development, which allows banks to increase their appeal by offering new banking products that meet customer needs. Third, market development, which directs banks to reach new markets by opening branches or forming strategic partnerships. Fourth, integration strategy, often undertaken during serious liquidity issues, allows banks to merge with or acquire other banks to strengthen their position. Lastly, the diversification strategy can be implemented as a concentration, focusing on a specific market segment, or as a conglomerate, providing various tailored products for large corporations.

Mobile Banking

Mobile banking is an information technology-based banking service that enables customers to conduct various banking transactions via mobile devices. Mobile banking adds value by allowing customers to access banking services without having to visit a bank office (Avornyo et al., 2024). This facility helps customers perform various banking activities, such as checking balances, transferring funds, and paying bills, anytime and anywhere, using a smartphone connected to the internet. The advantages of mobile banking lie in the convenience and flexibility of service access, which greatly benefits customers, along with time and cost efficiency that also benefits banks. However, this service

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also has limitations, such as daily transaction limits and dependence on internet connection quality. Therefore, security in mobile banking transactions is paramount. The Indonesian Bankers Association (2014) emphasizes that protecting the PIN is a primary measure, and customers are advised to change their PIN immediately if there is any indication of a breach. This security strategy aims to protect customer data and maintain trust in mobile banking services (Zhillan Sabtina Syawali et al., 2023).

QRIS (Quick Response Code Indonesian Standard)

QRIS is a national standard for QR-based payments developed by Bank Indonesia and the Indonesian Payment System Association (ASPI) (Infopriangan, 2023). QRIS enables easy and secure digital transactions for consumers and business owners. To expand non-cash payment acceptance and promote financial inclusion, Bank Indonesia adopted QRIS as Indonesia's payment standard. QRIS has four main characteristics known as UNGGUL (Universal, Gampang, Untung, and Langsung). The "Universal" characteristic means QRIS supports all QR-based payment applications, so people only need one payment application. "Gampang" denotes QRIS's ease of use, requiring only a single scan to complete transactions. "Untung" includes flexibility for users and merchants, while "Langsung" ensures that transactions are processed instantly, providing satisfaction and convenience for users and merchants.

Transaction Smoothness

Transaction smoothness refers to a condition where the exchange process between involved parties proceeds smoothly without barriers or disturbances, allowing each transaction to reach its objective (Setiawan & Mahyuni, 2020). The Kamus Besar Bahasa Indonesia (KBBI) defines smoothness as a state that is not hindered, thus supporting the successful attainment of goals. According to a study by Yogananda & Dirgantara (2017), transaction smoothness can be assessed based on several key indicators, namely ease, speed, added benefits, and efficiency (Bahar Agung Pambudi et al., 2020). These indicators can help evaluate how new technologies, like QRIS, improve the transaction experience for customers. Transaction smoothness is expected to provide easier access, faster processing times, and efficiency in each transaction, thereby enhancing customer performance and satisfaction in banking activities (Ibrahim & Thawil, 2019).

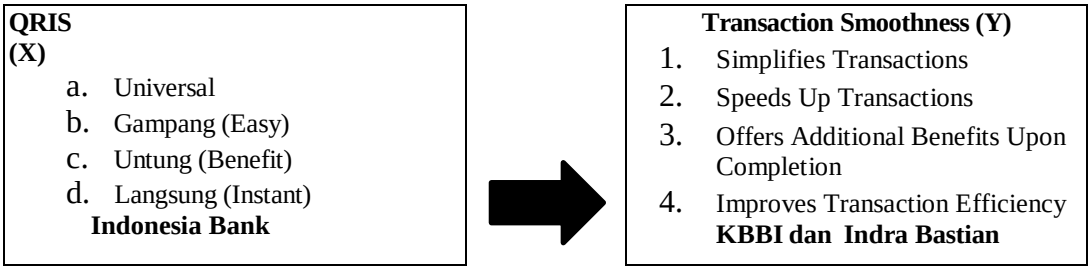

Figure 2. Conceptual Framework
Source: Processed by researchers, 2024

The proposed statistical hypothesis is that the Quick Response Code Indonesian Standard (QRIS) has a significant positive effect on Transaction Smoothness.

METHOD

The research approach used is quantitative, employing an explanatory survey method. The population consists of bank bjb customers in the Banjar area who use QRIS for transactions, allowing them to experience either positive or negative outcomes after using QRIS. Data collection was conducted using a 5-point Likert scale questionnaire distributed online via Google Forms to customers. Random sampling was employed, and a total of 100 responses were gathered. This sample size meets the minimum requirement for further analysis using SPSS, based on the standards established by Hair Jr. et al. (2023) regarding minimum sample size. The table below presents the minimum sample size requirements (Hair Jr et al., 2023).

Tabel 1. Minimum sample sizes.

Pmin	Significance Level		
	1%	**5%**	**10%**
0.05–0.1	1004	619	451
0.11–0.2	251	155	113
0.21–0.3	112	69	51
0.31–0.4	63	39	29
0.41–0.5	41	39	19

Sumber: (Sarstedt et al., 2019)

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The collected sample meets the conditions for further processing. The questionnaire's validity and reliability also meet the required criteria, with each instrument item scoring above 0.1966, and reliability indicated by an Alpha value greater than 0.60.

RESULT

Respondent Demographics

The respondent profile/demographic characteristics in this study include gender, education, and age. The summarized characteristics of respondents are shown in the table below.

Tabel 2. Respondent Characteristics

Criteria	Respondent	Frequency	Percent
Gender	Male	28	28%
	Female	72	72%
Education	High school	55	55%
	Associate degree	43	43%
	Bachelor's degree	2	2%
Age	17-21 years old	30	30%
	22-26 years old	33	33%
	27 years old	37	37%

Source: own research

Based on the respondent characteristics, online customers are predominantly female, possibly indicating that women tend to shop more frequently than men. Most respondents are high school graduates, and the average age is within the Gen Z category, a demographic highly familiar with technology (Hernandez-de-Menendez, 2020). This data shows that younger respondents are more inclined to shop and transact digitally.

Statistical analysis

Classical Assumption Test

The classical assumption tests for data normality and heteroskedasticity indicate that the data is suitable for further analysis.

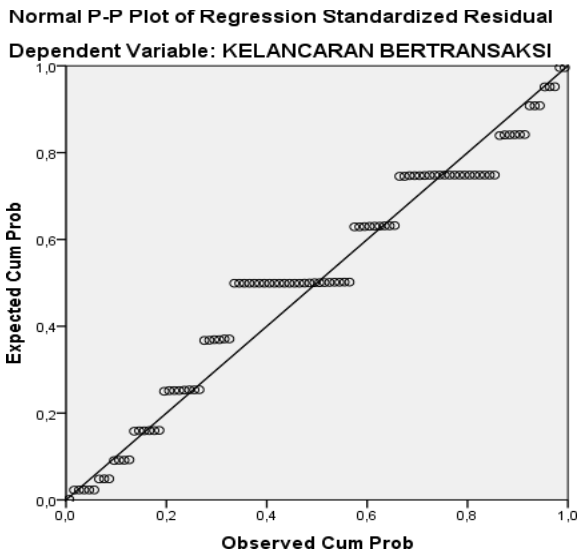

Figure 3. Data Normality Test Results
Source: SPSS 20 for Windows, processed August 2024

The points in the Normal Probability Plot graph generally follow the diagonal line, indicating that the data is normally distributed.

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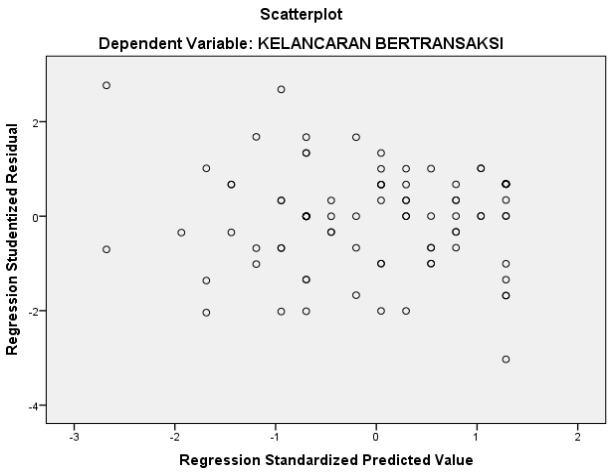

Figure 4. Heteroskedasticity Test Results
Source: SPSS 20 for Windows, processed August 2024

The scatterplot shows no clear pattern, with points dispersed above and below the zero line on the Y-axis, indicating that the data is free from heteroskedasticity issues.

Hypothesis Testing

Simple Linear Regression

Regression analysis is used to estimate whether the independent variable influences the dependent variable (Sugiyono, 2019).

Table 3. Simple Linear Regression Analysis Results

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	8,086	2,625		3,081	**,003**
1					
QRIS	**,998**	**,075**	,803	**13,317**	**,000**

a. Dependent Variable: Transaction Smoothness

Source: SPSS 20 for Windows, processed August 2024

The t-value of 13.317 is significantly greater than the t-table value of 1.984, obtained at a significance level of α = 0.05 with degrees of freedom (df) of 100-2 = 98. This comparison (1.984 < 13.317) and the significance level (0.000 < 0.05) lead to the conclusion that the alternative hypothesis (Ha) is accepted, and the null hypothesis (H0) is rejected. Thus, it can be stated that QRIS usage through the DIGI by bank bjb application significantly impacts the transaction smoothness for bank bjb deposit customers at the Banjar Branch.

Correlation Coefficient

The correlation coefficient analysis using SPSS version 20 yielded the following results:Tabel 4

Table 4. Correlation Coefficient Analysis Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	**,803**[a]	**,644**	**,640**	**3,007**

a. Predictors: (Constant), QRIS
b. Dependent Variable: Transaction Smoothness

Source: SPSS 20 for Windows, processed August 2024

With a correlation coefficient of 0.803 (between 0.80 and 1.00), there is a very strong relationship between QRIS usage and transaction smoothness. The R Square value of 0.644 indicates that QRIS usage contributes 64.4% to transaction smoothness, with the remaining 35.6% influenced by other factors not examined in this study.

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DISCUSSION

Overview of QRIS, DIGI Application, and Transactions

The use of the Quick Response Code Indonesian Standard (QRIS) via the DIGI by bank bjb application received an average score of 435, rated "Very Good." Users expressed positive feedback on the ease and efficiency of transactions facilitated by QRIS within the app, scoring highly on transaction convenience, speed, and notification ease. Overall, responses indicate that the DIGI by bank bjb application's QRIS feature effectively supports a comfortable, fast, and efficient transaction experience. However, one aspect received a "Good" rating, namely, the application's ability to scan all QRIS displayed by merchants, with a score of 414. This suggests room for improvement in this area to reach a "Very Good" rating across all service indicators. These findings indicate that the QRIS feature in DIGI by bank bjb generally meets user needs very well, with room for further improvements to increase customer satisfaction (Nur Aziz et al., 2022).

Transaction smoothness using QRIS DIGI by bank bjb (Variable Y) scored an average of 428, falling into the "Very Good" category. The data indicates that QRIS on the DIGI by bank bjb app supports a smooth and efficient transaction experience for users. Most indicators received a "Very Good" rating, particularly regarding ease, speed, and time savings in transactions. Respondents noted that QRIS DIGI helps them save time, energy, and effort during transactions, eliminating the need to manually count cash. This demonstrates that the QRIS DIGI feature significantly enhances transaction efficiency in users' daily lives (Zhillan Sabtina Syawali et al., 2023).

However, several aspects received a "Good" rating, such as the availability of cashback and discount promotions at certain events, as well as transaction cost savings. These slightly lower scores suggest that while the DIGI by bank bjb application has provided a good transaction experience, additional promotions or transaction cost savings could further improve customer satisfaction (Bahar Agung Pambudi et al., 2020). Overall, the findings show that the QRIS DIGI by bank bjb feature effectively supports transaction smoothness and efficiency, with some potential enhancements in promotional and cost-efficiency aspects to further improve user experience (Yuniastuti et al., 2012).

Influence of QRIS on Transactions

The analysis of regression results demonstrates a significant positive impact of Quick Response Code Indonesian Standard (QRIS) usage on transaction smoothness, as shown by the substantial t-value (13.317) exceeding the critical t-table value of 1.984 at a 0.05 significance level. This substantial effect ($p < 0.05$) confirms that QRIS adoption through DIGI by bank bjb plays a crucial role in optimizing the transaction experience for users, aligning with findings from other studies on the importance of digital payment systems in enhancing user satisfaction and operational efficiency (Mutiasari, 2020).

The correlation coefficient (0.803) reflects a strong positive relationship between QRIS usage and transaction fluidity, reinforcing previous findings on QR code payment technologies that emphasize transaction ease and user convenience as critical satisfaction factors in digital banking (Zhillan Sabtina Syawali et al., 2023). Specifically, with an R Square value of 0.644, the study demonstrates that 64.4% of the variance in transaction smoothness is attributable to QRIS usage, while other factors account for the remaining 35.6%. This underscores QRIS as a primary factor in creating smoother transaction experiences but suggests that areas such as interface usability, connectivity, and user education may further enhance customer satisfaction (Mutiasari, 2020).

This strong relationship between QRIS and transactional efficiency aligns with the broader literature suggesting that QR-based technologies significantly reduce transaction times and errors, thereby increasing overall customer satisfaction in digital environments (Bahar Agung Pambudi et al., 2020). Such efficiency improvements are essential for fostering customer loyalty and increasing retention, particularly in the highly competitive banking industry (Sava et al., 2024). Additionally, the findings of this study imply that continuous improvements in QRIS technology and expanding merchant partnerships can significantly impact user loyalty, supporting other research that identifies seamless payment experiences as critical to customer retention (Nursaid Nursaid & Nurul Qomariah, 2023).

Furthermore, given the rapid adoption of QR code technologies, particularly among younger and tech-savvy populations, QRIS's integration into mobile banking applications like DIGI by bank bjb offers competitive advantages in attracting new customers and retaining existing ones (Nur Aziz et al., 2022). This is consistent with findings on the importance of user-friendly interfaces in mobile banking applications, which not only enhance customer satisfaction but also contribute to operational efficiency (Wiwesa, 2021). Additionally, the results affirm which indicate that cashless payment behavior, particularly through QRIS, greatly simplifies transactions (Marlina et al., 2020).

Finally, the implications of QRIS adoption are supported by industry studies, which have shown that customers prioritize payment speed, convenience, and security. Thus, QRIS's continued enhancement is likely to position bank bjb as a leader in digital payment services, aligning with current trends in banking towards digital transformation and customer-centric service delivery (Natalia Kristanty, 2024).

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CONCLUSION

Summary

Based on the formulation of the problem, objectives and discussion, this research can be concluded.

1) The use of QRIS through the DIGI by bank bjb application has demonstrated very positive results in supporting convenience, ease, and transaction efficiency for users. Customer responses indicate a positive experience, especially in terms of transaction speed and ease.
2) Statistical tests show a significant positive influence of QRIS usage on transaction smoothness, aligning with the initial hypothesis. The regression test results indicate that QRIS usage enhances transaction smoothness for deposit customers at bank bjb's Banjar Branch.

Implications

1) The primary implication of this study's findings is the potential to enhance user loyalty by continuously developing and maximizing the QRIS feature on the DIGI application. By supporting faster, more efficient, and cost-effective transactions, Bank BJB can improve the overall customer experience.
2) Further development of QRIS features on the DIGI application can position Bank BJB as a leader in digital payment solutions, strengthening its competitive edge in the digital banking sector.
3) In a highly competitive digital banking landscape, offering a streamlined, high-quality transaction experience through QRIS can be a crucial factor for Bank BJB to maintain a competitive advantage, increasing its chances of success in meeting evolving customer expectations.

Advice

1) For Bank BJB Decision Makers
   Bank BJB should consider enhancing its promotional programs, such as cashback and discounts at various events, to attract more users and increase customer satisfaction.
1) For Application Developers
   Improving the application's ability to scan all QRIS codes from various merchants will enhance user experience and help the application achieve a "Very Good" rating across all service aspects.

Limitation

This study has several limitations that need to be acknowledged. First, the respondent coverage is limited to bank BJB customers at the Banjar branch, which may not fully represent the experience of QRIS users across the bank's entire network. Second, the study focuses on quantitative analysis without exploring qualitative factors that may more intricately influence user satisfaction.

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