SYARIKAT : Jurnal Rumpun Ekonomi Syariah
Volume 9 Nomor 1, Juni 2026
p-ISSN 2654-3923
e-ISSN 2621-6051

A Comparative Analysis of QRIS and Debit Card Usage in Generation Z's Cashless Transactions in Banjarmasin

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Abstract : The rapid digital transformation has fundamentally shifted consumer behavior toward cashless payment systems. While digital payment adoption among digital natives is widely acknowledged, limited research directly compares agile mobile platforms with conventional banking instruments. Consequently, this study aims to empirically compare the usage of the Quick Response Code Indonesian Standard (QRIS) and debit cards in Generation Z's daily cashless transactions within Banjarmasin City. Employing a quantitative comparative approach, primary data were collected through structured online questionnaires from a purposive sample of 100 Generation Z respondents. The gathered data were then statistically analyzed utilizing the non-parametric Mann-Whitney test. The analysis reveals a significant disparity in usage preferences, demonstrating that QRIS decisively outperforms debit cards. Generation Z strongly favors QRIS for its mobility, cost-effectiveness, and superior transaction speed. Conversely, debit card usage is increasingly constrained by its reliance on physical infrastructure, such as EDC machines. The study concludes that mobile-based digital payments are rapidly displacing traditional card instruments. However, this study is limited because it evaluates only two specific payment methods within a single demographic in a single regional city, suggesting the need for broader future research.

Keywords: QRIS, Debit Card, Generation Z

INTRODUCTION

The development of digital technology has driven major changes in modern society's payment systems, particularly the increasing dominance of cashless payment instruments in daily economic activities (Febriaty, 2019). This transformation has occurred because digital payment systems are considered more practical, faster, more efficient, and better at reducing the risks associated with using cash in both retail and high-value transactions. In Indonesia, one form of digital payment system development that has experienced very significant growth is the use of the Quick Response Code Indonesian Standard (QRIS) and debit cards as non-cash payment tools facilitated by banking institutions and digital payment service providers. The introduction of QRIS as a national standard for QR code-based payments, issued by Bank Indonesia since 2020, has successfully accelerated the digitalization of public transactions (Rachman et al., 2024; Zed et al., 2025), particularly in the micro-to-small business sector. The growth in QRIS usage is evident in the annual increase in national transaction value, which indicates growing public acceptance of digital payments (Pratiwi et al., 2025). At the same time, debit cards remain a widely used non-cash payment instrument because they are directly linked to users' bank accounts and have an extensive network of transaction options. This situation indicates that Indonesian society is in a transitional phase toward greater adoption of cashless payments, particularly among Generation Z, a group of digital natives with a high level of technological adaptation.

The phenomenon of increasing digital payment usage among Generation Z has been extensively discussed in various academic studies, particularly regarding perceptions of ease of use, technological benefits, and adoption behavior of digital payment systems (Andriyani et al., 2025; Sugiarto et al., 2026). However, despite the extensive literature on digital payment adoption, a significant research gap remains. Previous studies have predominantly focused on the adoption of single payment instruments in isolation, relying heavily on the Technology Acceptance Model (TAM) to measure interest in QRIS or digital wallets, without conducting direct empirical comparisons with conventional card-based instruments. Furthermore, most existing research is concentrated in the metropolitan areas of Java, leaving regional economic hubs like Banjarmasin—which represents a rapidly growing and unique digital SME ecosystem in South Kalimantan—underrepresented. Additionally, from the perspective of Islamic economics, prior studies often overlook how the transition toward digital instruments structurally aligns with the principles of *maslahah* (public interest) by promoting absolute transaction transparency and efficiency and by minimizing the risks associated with physical currency management.

Addressing these voids, the novelty of this study lies in its head-to-head empirical comparative analysis between a mobile-based platform (QRIS) and a traditional card-based instrument (debit card), specifically targeting Generation Z in Banjarmasin City. Unlike previous research that merely assesses general adoption rates, this study evaluates the potential substitution effect—whether agile digital platforms are displacing conventional banking instruments among digital natives. Furthermore, this research enriches the existing literature by contextualizing the cashless phenomenon within a regional economic landscape. This study aims to explicitly identify which digital payment instrument is most commonly used by Generation Z based on indicators of practicality, ease of use, cost efficiency, transaction speed, flexibility, and user trust.

Research comparing QRIS and debit card usage is crucial because changes in digital consumers' transaction behavior

affect not only payment systems but also consumption patterns, economic efficiency, and the development of the national digital financial ecosystem. The increasing dominance of QRIS usage indicates a shift in public preference toward more flexible, mobile-based payment instruments over physical cards, such as debit cards. Generation Z, as a productive age group born in the digital era, exhibits behavioral characteristics distinct from those of previous generations, particularly in the speed of technological adaptation and a preference for app-based digital services (Andriyani et al., 2025). Therefore, this study is crucial for determining whether there are significant differences in the use of QRIS and debit cards among Generation Z's cashless transaction activities in Banjarmasin City. In addition to providing an academic contribution, the results of this study can also serve as a basis for consideration by regulators, the banking sector, and digital payment service providers in designing payment system development strategies that better align with the needs of the younger generation. By understanding trends in the use of digital payment instruments among Generation Z, Indonesia's digital economic ecosystem is expected to develop more effectively and inclusively and to align with changes in modern societal behavior.

LITERATURE REVIEW

QRIS as an Agile Mobile Payment Innovation

QRIS, or the Indonesian Standard Quick Response Code, is a QR code-based digital payment system standard developed by Bank Indonesia in collaboration with the Indonesian Payment Systems Association as a form of national cashless payment integration that can be used across digital payment platforms (Ayuningtyas et al., 2024; Nada et al., 2021). The introduction of QRIS is part of the transformation toward a modern payment system aimed at improving transaction efficiency, expanding financial inclusion, and accelerating Indonesia's digital economy. In practice, QRIS allows users to make payments simply by scanning a QR code with a mobile banking app or digital wallet, without needing to carry cash or physical cards. This system is designed so that all payment service providers adhere to a uniform code standard, thereby facilitating transactions across banks and between digital payment applications (Grisella et al., 2025). Conceptually, QRIS is understood as a form of financial technology innovation that leverages mobile payment technology to create a payment system that is faster, safer, more practical, and more efficient. The development of QRIS also reflects a shift in the public's transactional paradigm toward a cashless society that increasingly relies on digital technology in daily economic activities. Beyond serving as a payment tool, QRIS is also viewed as an instrument supporting financial inclusion, as it can reach micro-entrepreneurs and communities that were previously not fully integrated into the formal financial system (Fitriyani & Susilawati, 2025; Sabrina et al., 2026). Thus, QRIS functions not only as a payment technology innovation but also as a strategic instrument in building a more inclusive and modern national digital economic ecosystem.

The manifestation of QRIS usage in community economic activities is evident in the increasingly widespread adoption of digital payments across sectors such as trade, services, education, and public services. In daily transactions, QRIS is used by various merchants, including SMEs, restaurants, coffee shops, supermarkets, and transportation services, as well as for donations and other public payments (Tarman et al., 2023). The adoption of QRIS among Generation Z is very high, as this group is a digital-native cohort accustomed to using app-based technology in their daily lives (Aspandi et al., 2025). Recent research indicates that QRIS usage among Generation Z is influenced by perceived ease of use,

digital habits, social influence, and users' level of innovation in digital payment technology (Sugiarto et al., 2026). Additionally, QRIS is viewed as a more practical payment method because transactions can be completed using only a smartphone, eliminating the need for physical cards or cash. In educational settings and among students, QRIS has even become the dominant payment method as it is seen as capable of speeding up transactions and simplifying users' expense management (Andriyani et al., 2025). Another manifestation of QRIS usage is the increasing integration of the national digital payment system across various business sectors and public services, demonstrating that QRIS has evolved into a vital component of modern society's digital economic behavior. Consequently, QRIS is no longer viewed merely as a payment innovation but has become a symbol of the transformation of digital lifestyles, particularly among Generation Z.

Debit Cards as Conventional Banking Instruments

A debit card is a cashless payment instrument issued by a banking institution and used to make payments by directly debiting the customer's account balance. In modern payment systems, debit cards have become one of the most widely used electronic payment methods because they allow transactions without carrying large amounts of cash. Conceptually, a debit card is considered a Card-Based Payment Instrument (CBPI), serving as a link between the user's bank account and electronic payment systems at merchants or ATMs (Achir & Kusumaningrum, 2021). The use of debit cards enables transactions to be processed quickly through Electronic Data Capture (EDC) networks, ATMs, or online transactions connected to the national banking system. Debit cards are also viewed as a form of financial transaction modernization that provides efficiency, security, and convenience in the public's economic activities. From a fintech perspective, debit cards serve as payment instruments that enable direct electronic transactions without physical cash, thereby supporting the development of a cashless society payment system. (Arabadzhy et al., 2021)Furthermore, the use of debit cards is also linked to the public's level of trust in the banking system, as all transactions are conducted through a system that is officially integrated and supervised by financial authorities (Yilmaz & Öngel, 2021). Thus, debit cards are not only understood as electronic payment tools but also as part of the digitalization of the financial system, driving changes in public transaction behavior toward a more efficient and modern economic system.

The use of debit cards is evident in various non-cash transactions by the public across sectors such as retail, services, banking, and daily consumption. In practice, debit cards are used for purchases at merchants equipped with EDC machines, cash withdrawals via ATMs, interbank transfers, bill payments, and online transactions linked to the user's bank account. The use of debit cards in modern society reflects a shift in transaction patterns from cash to more efficient and secure electronic payment systems (Nursari et al., 2019; Prasetyo et al., 2024). However, the use of debit cards has distinct characteristics compared to QRIS-based payment systems because debit cards still require a physical medium in the form of a card and infrastructure support, such as EDC machines or ATMs, to complete transactions (Hidayah et al., 2023). The prevalence of debit card usage is also evident in users' trust in transaction security, supported by PIN authentication systems, official banking networks, and financial institutions' data protection measures (Vaithyasubramanian, 2020). Among Generation Z, debit card usage remains relevant because it is perceived to provide direct control over account balances and users' financial transactions. However,

the development of mobile payment technologies has intensified competition for debit cards, with more flexible digital payment systems such as QRIS and digital wallets (Mada, 2025). This situation indicates that the use of debit cards in modern society is beginning to shift, particularly among younger demographics, who prefer digital, app-based payment systems, which they consider more practical and better aligned with the lifestyle of a mobile society.

Cashless Society and Generation Z's Behavioral Shift

Cashless transactions are payment systems conducted without the direct use of physical currency, using electronic instruments as a medium of exchange in economic activities. In the context of modern digital economic development, cashless transactions have become an integral part of the transformation of payment systems, aimed at enhancing the efficiency, security, and speed of public transactions. Conceptually, cashless transactions encompass various electronic payment instruments, such as debit and credit cards, mobile banking, digital wallets, electronic money, and QRIS, that facilitate daily payment activities. The use of cashless transactions is growing rapidly alongside the increasing use of information technology and the internet in modern economic activities. Cashless payment systems are considered capable of reducing cash management costs, accelerating the circulation of economic transactions, and improving the effectiveness of the national financial system.

Additionally, cashless transactions are viewed as part of the development of financial technology that expands public access to digital financial services (Rasyid Ridlo et al., 2025). From a consumer behavior perspective, the use of cashless transactions is influenced by factors such as ease of use (Yang et al., 2021), system security (Lai & Liew, 2021), cost efficiency (Raj L. et al., 2024), as well as technological suitability (Balakrishnan & Shuib, 2021) with user needs. Therefore, cashless transactions are understood not merely as a shift in payment methods but also as a change in public economic behavior, as people increasingly rely on digital technology for their daily transactions (Yefriza et al., 2024; Putwati et.,al, 2025).

The prevalence of cashless transactions is evident in the growing use of digital payment instruments in modern society, particularly among Generation Z, who exhibit exceptionally high levels of technology use. In practice, cashless transactions are used across various economic activities, such as purchasing food and beverages, paying for transportation, e-commerce, educational payments, and digital donations. Generation Z demonstrates a high level of adoption of cashless transactions because this group grew up in a digital environment where technology is integral to daily life (Alruthaya et al., 2021). The prevalence of cashless transactions among Generation Z is evident in their tendency to use smartphones as the primary tool for financial transactions, the high use of mobile banking and digital wallets, and a preference for QR code-based payments over cash. Recent research also indicates that cashless transactions among Generation Z are closely linked to digital literacy, modern lifestyles, and the need for fast, flexible payment systems (Indriana et al., 2026). Furthermore, the prevalence of cashless transactions is evident in the expanding integration of digital payments across the SME sector, education, transportation, and public services, demonstrating that electronic payment systems have become an integral part of modern society’s economic activities. Thus, cashless transactions are no longer merely an alternative payment method but have evolved into a primary necessity in supporting the mobility and efficiency of

contemporary society's digital economic activities.

Synthesis of Theoretical Contestation

In summary, the literature illustrates a clear theoretical contestation within the cashless society ecosystem: the conventional reliance on formal banking security and physical infrastructure (represented by debit cards) versus the modern demand for absolute mobility, minimal transaction barriers, and instantaneity (represented by QRIS). This theoretical debate forms the foundation of this study, aiming to empirically determine which set of values Generation Z prioritizes in their daily non-cash transactions.

METHODS

This study employs a quantitative comparative approach to empirically analyze the differences in the use of QRIS and debit cards among Generation Z in Banjarmasin City. Quantitative research enables researchers to obtain an empirical understanding of user behavioral trends based on the systematic and structured measurement of research indicators (Siyoto, 2015). The target population consists of 168,380 Generation Z individuals, based on 2025 data from the South Kalimantan Central Statistics Agency. The sampling technique in this study employed non-probability incidental sampling, which involves selecting respondents from anyone the researcher encounters who meets the study's criteria (Sugiyono, 2021). From this population, a sample of 100 respondents was calculated using the Slovin formula with a 10 percent margin of error. The sampling technique utilized was non-probability incidental sampling, specifically targeting Generation Z respondents who actively use both QRIS and debit cards for their daily cashless transactions.

Primary data were collected through an online survey using Google Forms, ensuring an efficient reach within this digital-native demographic. The online data collection method also facilitates the distribution of questionnaires and enables more efficient processing of research data (Lefever et al., 2007; Regmi et al., 2016). The research instrument was a Likert-scale questionnaire designed to objectively measure respondents' perceptions of specific variables: speed, ease of use, affordability, security, and reliability for the QRIS variable; and effectiveness, flexibility, convenience, and trust for the debit card variable. Secondary data, sourced from Bank Indonesia reports, national transaction statistics, and relevant academic literature, were also integrated to strengthen the study's conceptual framework.

Data analysis was systematically conducted using SPSS version 26. The analytical process began with descriptive statistics, followed by instrument testing for validity using Pearson's Correlation and reliability using Cronbach's Alpha. Subsequently, prerequisite tests were performed, including the Kolmogorov-Smirnov test for normality and the Levene Test for homogeneity. Because the prerequisite results indicated that the data were homogeneous but not normally distributed, the final hypothesis test was conducted using the nonparametric Mann-Whitney test. The use of non-parametric analysis techniques in quantitative research is considered appropriate when the research data do not meet the assumption of normality (Hopkins et al., 2018). This statistical method was appropriately chosen to accurately assess the significance of differences in usage preferences between QRIS and debit cards among Generation Z.

RESULT AND DISCUSSION

Research Findings

The research results indicate that QRIS has become a cashless payment instrument with a high adoption rate among Generation Z in Banjarmasin City. Based on data from a questionnaire distributed to 100 respondents, the majority gave positive

evaluations of QRIS usage across nearly all research indicators, particularly ease of use, transaction speed, cost efficiency, security, and practicality in daily payment activities

Table 1
Respondent Characteristics by Age

No	Gender	Number	Percentage
1	13–16 years	3	3%
2	17–20 years	56	56%
3	21–24 years	34	34%
4	25–28 years	7	7%
Total		100	100%

Source: Respondent Data Analysis, 2025

The high level of QRIS usage is evident in the dominance of respondents aged 17–20, most of whom are college or high school students who actively use smartphones for digital transactions.

Table 2
Respondent Characteristics by Income

No	Gender	Total	Percentage
1	< Rp3,000,000	75	75%
2	IDR 3,000,000 to IDR 7,000,000	22	22%
3	IDR 7,000,000 to IDR 10,000,000	1	1%
4	> Rp10,000,000	2	2%
Total		100	100%

Source: Respondent Data Analysis, 2025

Additionally, respondents with incomes below Rp3,000,000 tended to prefer QRIS because it does not impose additional fees on users during daily transactions. The research results also indicate that the use of QRIS is not limited to transactions in modern shopping centers but has expanded to the SME sector, coffee shops, restaurants, transportation, and public service payments in the city of Banjarmasin. These conditions indicate that QRIS has evolved into a digital payment instrument closely integrated with the economic activities of Generation Z. The dominance of QRIS usage in this study suggests that QR code-based payment systems have a high level of acceptance among digital native communities, as they are perceived as capable of meeting the need for fast, flexible, and practical transactions in modern life (Anzie et al., 2024).

The high usage of QRIS in this study can be explained by the variable indicator analysis results, which show that respondents gave very high ratings for the ease and efficiency of using this digital payment system. Regarding the speed indicator, respondents assessed that QRIS accelerates the transaction process because payments can be made simply by scanning a QR code using a smartphone, eliminating the need to carry cash or physical cards. Regarding the ease-of-use indicator, the majority of respondents stated that using QRIS is simpler than other payment methods because the entire transaction process can be conducted through mobile banking apps or digital wallets already available on users' devices. Additionally, regarding the affordability indicator, respondents assessed that QRIS is more economical because no additional transaction fees are charged to consumers. Positive evaluations were also evident in the safety and reliability indicators, where respondents felt more comfortable using QRIS because the payment system is nationally integrated and directly supervised by Bank Indonesia. These results indicate that the factors of perceived ease of use and perceived

usefulness have a significant influence on QRIS usage preferences among Generation Z. Thus, the data analysis reveals that the advancement of digital technology does not solely drive the dominance of QRIS usage but also because this system is perceived as capable of providing a more efficient, practical, and suitable transaction experience aligned with Generation Z's behavioral characteristics, which heavily rely on mobile technology in their daily lives.

The relationship between the high usage of QRIS and the research problem is evident in the public's shifting transaction behavior, which is increasingly moving toward digital payment systems. This situation indicates that Generation Z no longer views cashless transactions as an alternative payment method but as a primary necessity in daily economic activities. The research findings show that QRIS aligns better with the lifestyle of a mobile society because transactions can be conducted anytime, anywhere, using only a smartphone connected to a digital payment app. This reality reinforces the growing phenomenon of a cashless society in Indonesia, driven by the increasing use of digital technology in modern life. Additionally, the dominance of QRIS is linked to the expansion of the national digital payment ecosystem across the trade and public service sectors. The integration of QRIS with various merchants in Banjarmasin City provides Generation Z with more flexible access to transactions than debit cards, which still require physical devices and specific infrastructure such as EDC machines. The relationship between the research findings and empirical reality also indicates that the development of QRIS has altered the consumption patterns and economic behavior of young people, who prefer instant, fast transactions with minimal technical barriers. Thus, these findings demonstrate that QRIS has become the primary means of modern digital payment, capable of addressing Generation Z's transactional needs more effectively than other conventional non-cash payment methods.

Research findings on debit card usage indicate that this payment method remains widely adopted among Generation Z in Banjarmasin. However, it does not dominate the market to the same extent as QRIS. Based on data from the questionnaire distribution, respondents gave positive ratings regarding the indicators of effectiveness, flexibility, convenience, and trust in using debit cards as a cashless payment method. Most respondents stated that debit cards are still used for transactions at specific merchants that provide Electronic Data Capture (EDC) machines, for ATM transactions, for interbank transfers, and for payments requiring a direct connection to the user's savings account. Additionally, debit cards remain relevant because they provide users with a sense of security through PIN authentication and the protection of the official banking system. The research findings also indicate that debit card usage is more prevalent among respondents who already have active bank accounts and are accustomed to conducting formal financial transactions through the banking system.

Nevertheless, the preference for using debit cards is lower than for QRIS, particularly among respondents in the student and youth groups, who have high mobility. This situation indicates that debit cards still hold an important position in the cashless payment system of modern society. However, they are beginning to face challenges from the development of mobile app-based digital payments (Tarantang et al., 2019).

Analysis of the research data indicates that Generation Z continues to use debit cards because they are perceived to offer high levels of security and system reliability in financial transactions. Regarding the effectiveness indicator, respondents noted that debit cards simplify payment transactions because funds are linked

directly to the user's account, enabling quick payments via ATM networks or EDC machines. Regarding the flexibility indicator, respondents stated that debit cards can be used for various transaction needs, such as fund transfers, shopping payments, and cash withdrawals at both national and international ATM networks. Additionally, the trust indicator shows that users have high confidence in the security of the banking systems used in debit card transactions. However, the research findings also reveal several limitations of debit card usage compared to QRIS, particularly the need for a physical card, reliance on EDC machines, and certain fees, such as monthly administrative charges and interbank transfer fees. These factors led some respondents to view debit cards as less practical compared to QR code-based payment systems. These findings indicate that while debit cards remain trusted as a safe and stable payment method, advances in digital payment technology have shifted Generation Z's preferences toward simpler, more mobile-friendly payment instruments (Ekawati et al., 2024). Thus, debit cards still play a vital role in modern payment systems, but changes are increasingly influencing their use in young people's digital transaction behavior.

The relationship between debit card usage and the research findings indicates a shift in Generation Z's preferences toward non-cash transactions, increasingly moving toward digital payment systems that do not require physical cards. Although debit cards are still used for various transactions, research shows that Generation Z prioritizes payment instruments that can be accessed quickly on a smartphone over those that require additional devices. This reality indicates that the development of financial technology has shifted the function of debit cards from a primary payment instrument to a supporting instrument in specific transaction activities. Additionally, the research findings also show that debit card usage tends to be more limited to formal transactions directly linked to the banking system. In contrast, QRIS has a broader scope of use extending to the SME sector and microtransactions. This shift in transaction patterns indicates that young people are beginning to prioritize efficiency, flexibility, and speed when choosing payment methods. This trend is closely linked to the evolving transaction culture of modern society, which is increasingly reliant on mobile app-based digital payment systems (Yamin & Abdalatif, 2024). Thus, the relationship between research data and empirical reality shows that debit cards still have a place in the cashless payment system. However, their dominant position is being displaced by digital payment innovations that are more practical and better aligned with the characteristics of Generation Z, an active group of technology users.

Research findings on cashless transactions indicate that Generation Z in Banjarmasin City exhibits a high level of adaptation to digital payment systems in daily economic activities. Based on the findings, the majority of respondents reported using cashless payment methods more frequently than cash, as they are perceived to be faster, more practical, safer, and more efficient. The high use of cashless transactions is evident in respondents' habits when paying for food and beverages, purchasing daily necessities, paying for transportation, and paying for digital services using QRIS or debit cards. Additionally, data on respondent characteristics show that the 17–20 age group dominates digital payment usage, indicating that Generation Z is the segment of society most actively adopting technology-based payment systems. This study also indicates that Generation Z's use of cashless transactions is influenced by the increasing use of smartphones, the internet, and digital financial applications in daily life. These conditions demonstrate that cashless payment systems have become an integral

part of the digital lifestyle of modern society, particularly among younger age groups who are closely aligned with advancements in information technology (Alruthaya et al., 2021). Thus, the research findings indicate that the development of cashless transactions in Banjarmasin not only reflects progress in payment technology but also highlights a shift in public economic behavior toward a more modern and efficient digital transaction system.

An analysis of research on cashless transactions indicates that the high adoption of digital payment systems among Generation Z is influenced by a combination of technological factors, economic efficiency, and shifts in modern lifestyles. Respondents noted that cashless transactions offer convenience because the entire payment process can be completed instantly without the need to carry large amounts of cash. Additionally, cashless transactions are considered safer as they minimize the risk of losing physical cash and make it easier for users to monitor their financial transaction history digitally. Another factor driving the high adoption of cashless transactions is the growing integration of digital payment systems across various business sectors in Banjarmasin, giving residents more options for electronic payments. This study also shows that Generation Z is more likely to adopt technological innovations than previous generations because this group grew up in a digital environment heavily reliant on the internet and smartphones. This situation means that cashless transactions are viewed not only as a payment tool but also as part of young people's digital lifestyle identity (Indriana et al., 2026). Thus, the explanation of the research findings indicates that the adoption of cashless transactions among Generation Z is a logical consequence of technological transformation and shifts in consumer behavior that increasingly prioritize efficiency, speed, and flexibility in daily economic activities.

The relationship between cashless transactions and the research problem reveals that modern society is undergoing fundamental changes in economic transaction patterns due to the development of digital technology. The research findings indicate that Generation Z is the demographic group adopting digital payment systems the fastest, as they possess characteristics of adaptability to technological innovations and a lifestyle centered on instant gratification. This reality reinforces the trend toward a cashless society in Indonesia, marked by the growing use of QRIS, debit cards, mobile banking, and other digital payment instruments. Additionally, the research findings also indicate that cashless transactions have influenced changes in consumer behavior, with people increasingly prioritizing speed and efficiency in their economic activities. The development of digital payment systems in Banjarmasin demonstrates that the digital economic transformation is not limited to major metropolitan cities but is also expanding widely across urban areas in South Kalimantan. This indicates that the digitization of payment systems has become a crucial component in supporting the economic development of modern society (Payment Systems & Management of the Indonesian Rupiah, n.d.). Thus, the relationship between research findings and empirical reality demonstrates that Generation Z's use of cashless transactions is part of a social and economic transformation driving the development of a digital payment system that is more inclusive, efficient, and aligned with contemporary technological advancements.

Differences in the Use of QRIS and Debit Cards in Cashless Transactions by Generation Z in Banjarmasin

The results of this study indicate a significant difference in the use of QRIS and debit cards for Generation Z’s cashless transactions in Banjarmasin City, with QRIS as the dominant payment method. This

dominance is evident not only in usage frequency but also in respondents' positive perceptions regarding ease of use, cost efficiency, practicality, flexibility, and transaction speed. These findings indicate that Generation Z has a strong preference for payment instruments integrated with mobile devices that can be used instantly in various daily economic activities. On the other hand, debit cards are still viewed as safe and reliable payment instruments. However, they are beginning to see a decline in preference due to the limited flexibility of use compared to QR code-based payment systems. Additionally, the research results show that the development of digital payments in Banjarmasin has shaped new economic behavior patterns among young people, who are increasingly relying on digital technology for their transactional activities. Thus, the main findings of this study indicate that changes in payment instrument preferences among Generation Z are not only influenced by technological advancements but are also linked to shifts in lifestyle, consumption patterns, and the need for more practical payment systems to support the mobility of modern society (Richard et al., 2023).

The findings of this study are closely related to previous studies on digital payment system usage; however, this study offers a unique advantage by specifically comparing the use of QRIS and debit cards among Generation Z in Banjarmasin City. Previous studies generally discussed factors influencing interest in using QRIS or digital wallets in isolation, without linking them to other non-cash payment instruments, such as debit cards. In this study, the comparative approach allows researchers to obtain a clearer empirical picture of changes in non-cash transaction preferences among digital natives. The research results reinforce the Technology Acceptance Model, which posits that technology acceptance is influenced by perceptions of the ease and benefits of using the technology (Grisella et al., 2025; Sabrina et al., 2026). However, this study reveals an additional dimension: transaction costs, usage flexibility, and the integration of payment systems within the SME sector also play a significant role in determining the dominance of QRIS usage among Generation Z (Gusman et al., 2025). Another strength of this study lies in its local context, as it was conducted in Banjarmasin, thereby offering a new perspective on the development of digital payment systems in South Kalimantan. This area has been relatively under-researched in previous studies. Consequently, this study not only confirms prior research findings regarding the increasing use of digital payments but also expands academic understanding of changes in young people's transaction behaviors within the context of the regional digital economy.

The findings of this study indicate that the transformation of digital payment systems has fundamentally changed the economic behavior of Generation Z, particularly in how they choose and use cashless payment methods. Generation Z's tendency to prefer QRIS over debit cards suggests that this younger demographic values efficiency, mobility, and ease of access more highly than payment methods that still rely on physical devices. This finding indicates that the development of the digital economy is no longer merely about technological innovation but has also shaped a new transaction culture that is faster, more practical, and integrated into the digital lives of modern society. Furthermore, the high usage of QRIS demonstrates that QR code-based payment systems can meet society's transaction needs in the digital era, which demands instant and flexible payment processes. In the context of the research objectives, these findings provide academic benefits by offering empirical insight into shifts in Generation Z's non-cash payment preferences and illustrating how digital payment technology can influence consumption patterns and economic

activities. Another insight from this study is that the development of digital payments has significant potential to expand financial inclusion and accelerate society's integration into the national digital economy (Al Qardh et al., 2019; Maisaroh & Wahyuni, 2024; Yuko et al., 2025). Thus, this study demonstrates that changes in Generation Z's transaction behavior are part of a broader social transformation within the development of Indonesia's digital economy.

The findings suggest that the development of QRIS-based digital payment systems has strategic implications for various sectors, including the financial sector, commerce, and national digital economic policy. The dominance of QRIS usage among Generation Z indicates that financial institutions and regulators need to expand the integration of digital payment systems to better align with the needs of young people who prioritize transaction efficiency via mobile technology. Additionally, these findings have implications for businesses, particularly SMEs in Banjarmasin City, as QRIS usage has proven more effective at attracting Generation Z consumers compared to conventional payment methods. On the other hand, this study shows that debit cards still play a crucial role in formal transactions requiring direct connection to the banking system; thus, the presence of both payment instruments remains complementary within the modern society's cashless transaction ecosystem. Another implication of this study concerns the development of digital financial literacy among the public, particularly by enhancing understanding of electronic transaction security and the effective use of digital payment systems. In addition to providing practical benefits for the banking sector and regulators, the results of this study can serve as a basis for developing more inclusive and adaptive digital transformation policies that are responsive to changes in the younger generation's transaction behavior. Thus, the implications of this study demonstrate that the development of digital payments not only impacts changes in transaction methods but also influences the broader direction of digital economic development in society.

The research findings showing the dominance of QRIS usage over debit cards can be interpreted as a logical consequence of changes in the behavior of the digital society, which increasingly prioritizes speed, flexibility, and efficiency in economic transactions. Generation Z, as a group of digital natives, is more likely to adopt technologies that are simple and easy to integrate with the devices they use daily, particularly smartphones. QRIS meets these needs because transactions can be conducted without carrying a physical card or relying on an EDC machine, and it can be used at various types of merchants, ranging from micro-enterprises to modern shopping centers. Additionally, cost is a primary reason QRIS is preferred, especially among respondents with low incomes, who dominate this study. Unlike debit cards, which still incur administrative fees and have certain usage limitations, QRIS is viewed as more economical and practical for daily transactions. Another factor contributing to these research findings is the expanding support for national digital payment infrastructure, which accelerates QRIS penetration across various sectors of the economy. From a digital consumer behavior perspective, Generation Z tends to choose technologies that offer the most efficient transaction experience with minimal barriers (Al-Qudah et al., 2024). Therefore, this study's findings indicate that QRIS's dominance is not coincidental but rather the result of digital payment technology aligning with the characteristics and needs of Generation Z in the modern digital economy.

Based on these findings, several strategic actions are needed to support the development of a more effective and inclusive digital payment system for the

public. First, regulators and banking institutions must expand digital financial education and literacy among the public, particularly regarding the security of cashless payments and the prudent management of digital transactions. Second, local governments and businesses need to enhance the integration of QRIS across various sectors of public services and community economic activities so that digital payment systems can be used more widely and evenly. Third, the banking sector's financial institutions need to innovate their debit card services to remain relevant amid the increasingly dominant development of QR code-based digital payments. Such innovation can be achieved by improving the integration of debit cards with mobile app-based digital services, thereby making the user's transaction experience more flexible and practical.

Additionally, the development of internet infrastructure and digital transaction security systems must be strengthened to ensure that cashless payments can operate stably and securely across all regions. In an academic context, the findings of this study also highlight the need for further research into public digital transaction behavior, accounting for variables such as digital literacy, cybersecurity, and user trust in financial technology (Indriana et al., 2026). Thus, the actions to be taken based on these research findings are not only related to the development of payment technology but also to efforts to build a digital economic ecosystem that is more adaptive to changes in modern society's behavior.

CONCLUSION

This study concludes that there is a significant disparity in the usage of cashless payment instruments among Generation Z in Banjarmasin City, with QRIS decisively outperforming debit cards. The empirical results demonstrate that digital natives prioritize QRIS for its superior practicality, full mobile accessibility, transaction speed, and cost-efficiency. Although debit cards remain trusted for formal banking procedures, their usage is increasingly constrained by the reliance on physical infrastructure, such as EDC machines. This confirms a rapid behavioral shift toward an instant, mobile-first economic ecosystem. Practically, this study provides a crucial empirical foundation for regulators and financial institutions to innovate their digital payment infrastructures to better align with the fast-paced, efficiency-driven demands of modern society.

However, this study recognizes its scope limitations, as it exclusively focused on Generation Z in Banjarmasin and evaluated only two payment methods. For future research, it is highly recommended to expand the geographical coverage and incorporate a wider array of modern digital transaction variables, such as e-wallets, mobile banking, and paylater services. Furthermore, subsequent studies should adopt mixed-methods or qualitative approaches to investigate the deeper psychological aspects of digital financial literacy, cybersecurity trust, and systemic loyalty. Such explorations will significantly enrich the academic discourse on the continuous transformation of public economic behavior in the digital era.

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