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Article

Challenges and Opportunities for QRIS Implementation as a Digital Payment System in Indonesia

[1]Abdul Rachman, [2]Niken Julianti, and [3]Siti Arkoyah

[123] Cendekia Abditama University, Indonesia

* Corresponding author: abdulrachman@uca.ac.id

ABSTRACT

This research aims to analyze the challenges and opportunities for implementing QRIS (Quick Response Code Indonesian Standard) as one of the digital payment systems in Indonesia which has been provided by Bank Indonesia as an application that provides convenience, speed, and efficiency in payment transactions. However, the implementation of QRIS as a digital payment system in Indonesia still faces many challenges, such as limited internet access, competition with other payment systems, security aspects in use that have the potential for fraud or data theft, and low public understanding of QRIS. This research uses descriptive qualitative research methods with a focus on challenges and opportunities in implementing QRIS in Indonesia. The primary data sources in this research are observations and in-depth interviews with business actors who use QRIS. Secondary data sources were obtained from Bank Indonesia QRIS documents and data. This research found that the challenges in implementing QRIS in Indonesia are still low support from the central government and regional governments in accelerating the use of QRIS, not yet optimal cooperation between financial institutions, industry, and society, inadequate information technology infrastructure, and low public understanding about QRIS. Meanwhile, QRIS has enormous opportunities because it is one of the instruments in encouraging digital economic acceleration that is inclusive and efficient. QRIS has huge market potential because there is an increasing number of smartphone users every year.

Keywords: Challenges; Opportunities; QRIS; Digital; System

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INTRODUCTION

Reports from Bank Indonesia (BI) for 2021 the value of electronic money transactions grows to 49.06 percent (antaranews.com, 2022). This report illustrates that there is a digital transformation in using payment applications. The Kadence International Indonesia survey agency even explained the results of a survey conducted in 2021 that 44 percent of respondents use digital payments at least four times a week. (https://republika.co.id, 2021). The survey results corroborate Bank Indonesia's data regarding digital economic growth in Indonesia and even illustrate changes in people's behavior in using digital applications for transactions. This growth was influenced by people's lifestyles during the Covid-19 pandemic and has continued to this day (Fahta et al., 2022). The ease of making transactions to meet daily needs makes digital payments attractive to the public (Wijoyo, 2021).

In the increasingly advanced digital era, the need for an efficient, safe, and easy-to-use payment system is an important requirement (Muditomo & Wahyudi, 2020). The government has realized the importance of digital transformation in the financial sector and introduced QRIS (Quick Response Code Indonesian Standard) as a payment solution that has the potential to replace cash payment methods. QRIS is a system that utilizes QR code technology to facilitate fast and practical electronic financial transactions. Bank Indonesia and the Indonesian government are actively encouraging the use of QRIS as an easier and more efficient means of electronic payment. QRIS is also a part of the National Non-Cash Movement (GNNT) program which aims to reduce the use of cash in Indonesia and increase public financial inclusion.

There are several research results on QRIS. In this study, it was stated that QRIS provides convenience for its users in conducting business transactions. Melly Susanti and Heru Kresnha Reza in their article Added Value and Ease of Using Quick Responses QRIS Indonesian Standard (QRIS) stated that QRIS provides convenience for consumers in shopping (Susanti & Reza, 2022). Consumers who use the QRIS application prefer the convenience offered by the QRIS program rather than the added value that exists in the QRIS application. Likewise, the results of research conducted by Defi Insani Saibil et al in the article titled Factors Influencing Intentions to Use QRIS in Sharia Mobile Banking During the Covid-19 Pandemic states that people have good intentions and find it easy to use QRIS (Saibil et al., 2022).

The use of QRIS is not only intended for business transactions but is used as a way to collect funds for zakat, infaq, and alms, as per research conducted by Tri Wahyono regarding QRIS as A Fundraising Strategy of ZIS Funds (Wahyono, 2022). This research analyzes the method of collecting zakat, infaq, and alms (ZIS) funds using QRIS so that maximum results can be obtained. This is done because the potential for zakat, infaq, and alms funds is very large. (Handiasti & Rohim, 2023). QRIS is an innovative, creative, and efficient way of carrying out transactions or payments such as paying zakat, infaq, and alms. Through QRIS, every muzakki can easily distribute their zakat funds (Rachman & Salam, 2018).

Arum Candra Sari et al in their research Implementation of QRIS-Based Payments Towards the Digitalization of Indonesian MSMEs explain that QRIS has various benefits for both merchants and users (Sari & Adinugraha, 2022). QRIS implementation for merchants provides benefits in terms of increased sales, practicality, branding, savings, avoidance of counterfeit money, separation of business funds, and credit profile (Wahyudin et al., 2022). The benefits of QRIS for users include being flexible, safe, and practical in transactions so that QRIS can be a driving force for

accelerating digitization in the payment system. Several studies have shown that QRIS as a method of digital transactions provides convenience and benefits for its users.

However, the implementation of QRIS as a digital payment system in Indonesia still faces many challenges. One of the main challenges is people's adaptation and understanding of this new technology. Even though the use of smartphones in Indonesia has increased significantly, there is still a large portion of people who are not used to cashless transactions. Effective educational efforts are needed to introduce QRIS to the public, explain its benefits, and help address concerns about security and privacy. Other challenges in implementing QRIS in Indonesia are limited internet access, competition with other payment systems, the security aspect of its use which has the potential for fraud or data theft, and a lack of understanding about QRIS.

The challenge as well as the opportunity in implementing QRIS in Indonesia is that internet connectivity is limited to several areas that have internet networks, making it difficult to use QRIS. This problem is supported by the research of Nathan Eleazar Rafferty, Ahmad Nurul Fajar regarding QR Code Payment, Integrated Payment, Business Operations, and Cashless in Developing Countries (Rafferty & Fajar, 2022). The research illustrates that Indonesia is facing significant problems with its infrastructure which makes it difficult for merchants to access digital payments because infrastructure is a common problem for developing countries. Technology infrastructure is one of the main challenges in supporting QRIS transactions throughout Indonesia, including in remote areas because technological infrastructure is an important factor in the success of QRIS as a digital payment system. This requires cooperation between governments, network providers, and other stakeholders to expand accessibility and improve connectivity across countries. QRIS can become a digital payment instrument that is of interest to the public because of the results of a survey by the Association of Indonesian Internet Service Providers (APJII) which states that there has been an increase in internet users as a percentage of the total population in Indonesia. Based on We Are Social research, there are 175.2 million internet users in Indonesia (https://wearesocial.com, 2022). The results of this survey can be an opportunity for technological advances, especially digital payments using QRIS.

This study is important as it aims to conduct an in-depth examination of the challenges associated with implementing Quick Response Code Indonesian Standard (QRIS) in Indonesia. These challenges include limited technological knowledge among certain segments of the population, inadequate information technology infrastructure in various regions (particularly in areas with limited internet access), and low public awareness about QRIS. Overcoming these obstacles is essential for the comprehensive implementation of QRIS, not only for business purposes, but also for social activities and donations such as zakat, infaq, alms, and waqf. QRIS presents a significant opportunity to enhance digital payment systems due to its effectiveness, efficiency, and transparency. This research aims to identify both the challenges and opportunities of QRIS in order to provide recommendations for concrete and actionable policies. The ultimate goal is to overcome these challenges and expand the opportunities for QRIS in Indonesia, thereby optimizing digital payment infrastructure and improving the accessibility of digital financial services.

LITERATURE REVIEW

QRIS is a Digital Payment System in Indonesia

Quick Response Code Indonesian Standard (QRIS) is a payment standardization that uses a QR-Code from Bank Indonesia so that the transaction process with a barcode is easier, faster, and safer (Rafferty & Fajar, 2022). Before QRIS, payments could only be made at the merchant of the recipient's service provider. Currently, all PJSP applications can be carried out using the Code of all different merchants. Bank Indonesia gave the name QRIS with the theme of the excellent spirit, namely inclusive and universal, people can use it both domestically and abroad, Easy, namely people can use it easily via cellphones, Fortunately, sellers and buyers can carry out transactions efficiently through the QR Code with a variety of various mobile payments (Sari & Adinugraha, 2022).

Bank Indonesia launched payments using the QRIS method on the 74th-anniversary celebrations on 17 August 2019. On 1 January 2020, Bank Indonesia required all payment services to use the QRIS system. Therefore, QRIS can be used by all merchants in collaboration with Payment System Service Providers (PJSP). One QR Code for all payments (Saibil et al., 2022). QRIS or known as KRIS can be used anywhere and anytime. QRIS has a two-dimensional barcode type which contains more information than barcodes and can be read from various directions horizontally. The use of QRIS is more widely used by MSME players, even according to the Head of the Payment System Policy Department of Bank Indonesia, Filianingsih, as many as 10.45 million merchants have used QRIS as of September 17, 2021. This number is dominated by MSME actors, namely 96% (https://www.theiconomics.com, 2021).

QRIS is a QR Code standard for digital payments through server-based electronic money applications, electronic wallets, or mobile banking (Handiasti & Rohim, 2023). QRIS is a digital payment system that has a QR Code standard. There are two types of QR Codes provided, namely Static QR Codes and Dynamic QR codes. Digital payments through QRIS also aim to make it easier and can be monitored by regulators. Therefore, all non-cash payment service providers such as e-money and e-wallets are required to use QRIS. Transactions using QRIS are more flexible without having to face to face.

Table 1
Types of QR Codes

Static QR Code	Dynamic QR Code
▪ QR Code contains Merchant ID & is permanent, displayed on sticker/print-out (QR is generated once) ▪ The transaction nominal is inputted by the customer on the customer's mobile device	▪ QR Code is generated in real-time at the time of transaction so that the QR Code is different for each transaction. ▪ Nominal transactions are inputted by the merchant

Source: Bank Indonesia, 2023

Transaction Method Using QRIS

QRIS is a non-cash payment method that can be done without time and place restrictions because it can be done anywhere and at any time. QRIS provides a lot of convenience and time and cost efficiency because QRIS is a technological innovation in digital economics and finance created by Bank Indonesia and the Indonesian Payment System Association (ASPI) (Aisyah et al., 2023). QRIS was launched to support the development and growth of the digital economy. With QRIS, all digital payments become easier, more effective, and more efficient. The advantage of QRIS compared to other payment systems is that it can distinguish domestic transactions from international transactions (https://sikapiuangmu.ojk.go.id., 2023). It's just that there is a transaction limit via QRIS, which is a maximum of five million per transaction. This is one

of QRIS' weaknesses in conducting digital transactions.

The transaction method using QRIS is very easy. Anyone who has a cell phone with a camera and data connectivity, as well as an electronic payment account can make payments via QRIS. Consumers can select and download payment applications installed on their cell phones. The consumer registers with a PJSP and ensures the availability of a balance to make transactions (Pratiwi et al., 2022). Through the application, consumers scan QRIS at merchants, enter transaction amounts, authorize transactions, and then confirm payments to goods and/or service providers. There are no additional costs for consumers when making payments via QRIS (Susanti & Reza, 2022). The transaction process with QRIS continues to use the existing QR payment application. What's different is that the QR Code that is used now can be scanned using any QR payment application even though it is provided by a different PJSP. In addition, each QRIS merchant has a National merchant ID a unique NMID that can be used by consumers as additional information besides the merchant's name, to match the recipient of the transaction when paying.

QRIS has become a digital payment system that is in great demand by business people because QRIS is available in all provinces and almost all urban districts in Indonesia. Many small traders in traditional markets, modern markets, and even business actors such as supermarkets, minimarkets, and even educational institutions and social institutions also use QRIS as a means of non-cash payment. QRIS users are more dominated by MSMEs because it can help businesses improve their business services by innovating in digital payments to make it easier for consumers to pay digitally. The following is the difference between transactions before using QRIS and after using QRIS.

Table 2

Differences in Transactions Before and After QRIS

Transaction Method Before QRIS	Transaction Method After QRIS
▪ Merchants must be willing to prepare the required number of applications. ▪ Consumers who pay non-cash must ensure that their application must be available at the merchant	Merchants don't need to prepare several applications, only prepare a QR Code in the figure which can be scanned by the public with various applications that are on your cellphone.

Source: Bank Indonesia, 2023

METHODOLOGY

In conducting this study, the method used was descriptive qualitative. This research focuses on studying the challenges and opportunities for implementing QRIS in Indonesia. This study was carried out because QRIS is a digital payment tool that is of interest to many business actors such as MSMEs and others. Data collection in this research is divided into two, namely primary data and secondary data. Primary data was obtained through the process of observing several business actors and non-profit institutions that use QRIS as well as conducting in-depth interviews with merchants, non-profit institutions, and consumers who use QRIS as a non-cash payment tool. Meanwhile, secondary data comes from several Bank Indonesia documents, data, articles, and survey results from Kadence International in 2021, the Annual Report of the Indonesian Payment System Association (ASPI) dated 31 December 2021, the results of Neurosensum Indonesia research in 2021, the

results of InsightAsia's research on Consistency That Leads: 2023 E-Wallet Industry Outlook.

RESULT AND DISCUSSION

Digital Payment Application in Indonesia

There are several types of digital payment applications in Indonesia, the first is chip-based electronic money issued by banks such as Flazz, TapCash, and E-Money. The second is electronic wallets (e-wallets) such as Flip, GoPay, OVO, ShopeePay, DANA, and LinkAja. Third is a credit card. Many platforms provide payment options using a credit card or virtual credit card in transactions. The fourth is Internet banking, mobile banking, and SMS banking. This payment instrument is a digital banking service that makes it easy for customers to make transactions or just check transactions (Abdul dkk., 2022). QRIS is the fifth type of digital payment that is in great demand by many parties, both merchants and users because it provides convenience in payments for both transactions and payments of zakat, infaq, and alms (Wahyudin et al., 2022).

Many factors can influence QRIS to become a digital payment instrument that is in great demand by many groups because there are already many merchants that serve cashless payments; starting from shops in shopping centers, to small stalls, such as shops for drinks, food, fashion and so on (Sari & Adinugraha, 2022). Another factor is that QRIS has pretty much been integrated with other financial services, such as finding this QRIS feature in various e-wallets, mobile banking, and other digital bank and neo-bank services. QRIS (Quick Response Code Indonesian Standard) is a digital payment system, which brings together various QR codes from various Payment System Service Providers (PJSP) in Indonesia, which also use QR codes.

QRIS is a digital payment system that is widely used besides other digital payment systems such as OVO, ShoppePay, Gopay, DANA, and LinkAja. Changes in payment patterns from offline to online are affected by the presence of Covid-19 (Muditomo & Wahyudi, 2020). Based on Neurosensum Indonesia's research, the use of digital payments such as e-wallets before the Covid-19 pandemic was only around 10% (https://neurosensum.com, 2023). However, when there was a spike in the Covid-19 pandemic, the use of digital payments such as OVO, ShoppePay, and others increased by 44%. Kadence Indonesia's research in 2021 stated that OVO is the most well-known digital wallet (e-wallet) among the public with a brand awareness level of 96% (*https://kadence.com*, 2023). The phenomenon of Indonesian people's preference for the use of mobile banking, digital banking, and e-wallet applications is corroborated by the results of the Consumer Preference Towards Banking and e-Wallet Apps survey conducted by Populix that 91 percent of respondents have mobile banking applications, 84 percent have e-wallets, and 33 percent installed a digital banking application (https://bisnis.tempo.co/, 2022).

Digital Payment System Regulations and Policies

Fadwa Zaoui and Nissrine Souissi in their article entitled Roadmap for digital transformation: A literature review that digital transformation is an interesting issue in the world for all companies to be able to make changes in all sectors (Zaoui & Souissi, 2020). Data from Bank Indonesia, digital payment transactions have increased from IDR 145 trillion in 2019 to IDR 205 trillion in 2020. Digital payments in Indonesia are increasingly in demand by many parties, not only MSME players. The growth of digital payments in Indonesia is of course by established regulations. Likewise, the implementation of QRIS in Indonesia has a legal basis so that it does not violate laws and regulations because since QRIS was implemented

on January 1, 2020, QRIS has been circulating in all 34 provinces in Indonesia and also circulating in 480 urban districts in Indonesia and the number of organizers is 66 payment system service providers (PJSP).

The implementation of QRIS in Indonesia refers to the Regulation of Members of the Board of Governors Number 23/8/PADG/2021 concerning amendments to the Regulation of Members of the Board of Governors Number 21/18/PADG/2019 concerning the Implementation of the National Standard Quick Response Code for payments In Article 1 number 5 PADG 21/ 18/PADG/2019 states that the national QR Code payment standard (Quick Response Code Indonesian Standard), hereinafter referred to as QRIS, is the QR Code Payment standard set by Bank Indonesia to be used to facilitate payment transactions in Indonesia. However, several regulations that regulate digital payment activities, in general, include Bank Indonesia Regulation Number 20/6/PBI/2018 concerning Electronic Money. Government Regulation no. 82 of 2012 concerning the Implementation of Electronic Systems and Transactions, Regulation of the Financial Services Authority Number 12/POJK.03/2018 concerning Implementation of Digital Banking Services by Commercial Banks, Regulation of Members of the Board of Governors Number 21/18/PADG/2019 concerning Implementation of the Quick Response Code National Standard for Payments and Regulation of Members of the Board of Governors Number 24/1/PADG/2022 dated 25 February 2022 concerning the Second Amendment to Regulation of Members of the Board of Governors Number 21/18/PADG/2019 concerning Implementation of the National Standard Quick Response Code for Payments.

DISCUSSION

Business Innovation Through Digital Payments With QRIS

All business actors non-profit institutions and others can use non-cash payment applications both in transactions and paying zakat, infaq, and alms or other donations with QRIS. Bank Indonesia is enthusiastic about developing digital-based payment tools to accelerate digital economic development such as QRIS. Even Satish Nambisan et al stated in their article entitled The digital transformation of Innovation and Entrepreneurship: Progress, challenges and key themes that the emergence of new and powerful digital technologies, digital platforms, and digital infrastructure has changed innovation and entrepreneurship significantly (Nambisan et al., 2019). Therefore, to realize the vision of the Indonesian Payment System 2025, innovation support is needed for the development of the digital economy and finance. One of the innovations that are developing and starting to be widely used is a QR Code-based digital payment service. Bank Indonesia sees the benefits of this payment method to boost economic efficiency, accelerate financial inclusion, and advance MSMEs (Kurniawati et al., 2021).

Head of Bank Indonesia's Payment System Policy Department, Filianingsih Hendarta, stated that Bank Indonesia is targeting QRIS to be used by 12 million merchants. There was an increase in the number of merchants using QRIS on September 17, 2021, reaching 10.45 million users. The majority of QRIS users are MSME merchants, amounting to 96%. BI predicts that digital payments will grow rapidly in the coming years (Rafferty & Fajar, 2022). This means that digital transactions play a role in the growth of Indonesia's digital economy, both today and in the future. Indonesia will connect the QRIS system to several other countries, namely Thailand, Singapore, Malaysia to the Philippines. The use of QRIS will be used across countries making it easier for MSME and tourism actors. The ease of using QRIS in transactions is an attraction

for merchants and users to develop their businesses through innovation in digital payment systems. Following are the advantages of QRIS as one of the innovations in the development of the digital economy;

Figure 1
Advantages of QRIS as a Digital Payment System

QRIS Implementation Challenges in the Payment System

Sascha Kraus et al stated in their research Digital Transformation: An Overview of the Current State of the Art of Research that digital transformation has an impact on the technological, business, and social fields (Kraus et al., 2021). Digital transformation has created new lifestyle patterns in all aspects, including digital payments, which started a long time ago. Its growth began with the Covid-19 pandemic until now (Muditomo & Wahyudi, 2020). Digital transformation in the payment system can be carried out with a variety of applications, including e-wallets, m-banking, internet banking, and QRIS. Many choices in digital payment systems. However, e-wallet is one of the most popular digital payment systems based on research conducted by InsightAsia (https://insightasia.com, 2022). Therefore, to encourage the massive use of digital payment systems, Bank Indonesia, as a regulator, created a digital payment system in the form of QRIS. QRIS or commonly called KRIS has been implemented since 2020 to be able to support transactions that comply with health protocols while at the same time encouraging recorded MSME transactions to facilitate the target of lending.

The existence of QRIS is increasingly in demand by the Indonesian people with an increase in the number of QRIS merchants, including the volume and nominal transactions. Acceptance of QRIS is increasingly widespread in all business fields from micro to large and has spread throughout Indonesia, namely, 34 Provinces and 480 districts/cities, and 96% of users are from the MSME community. However, the implementation of QRIS as a digital payment system in Indonesia certainly faces several challenges that must be

addressed as a means of support and constructive input so that it can fill in weaknesses and improve existing capabilities. Some of the challenges that must be faced, are as follows;

The first is active education and promotion regarding the use of QRIS. There are still people who don't understand and know that QRIS is a payment method or don't even know how to use it. Therefore, it is necessary to carry out training and socialization through educational institutions, social institutions, local governments, and even communities to be able to introduce QRIS and encourage the use of QRIS as a means of digital payment apart from e-wallets and others. The second is that infrastructure in Indonesia is also a challenge in implementing QRIS broadly. Some business places may not have compatible devices or sufficient internet access to use QRIS. Therefore, it is necessary to invest in the necessary infrastructure and stable internet connectivity to ensure the success of QRIS in all regions in Indonesia. Dependence on internet connection is also a challenge, especially in remote areas or with limited connectivity. A stable internet connection is required to scan and process QRIS transactions. Therefore it is necessary to make efforts to expand the reach of the Internet in all parts of Indonesia.

Third, the level of transaction security and data protection is another challenge in the payment system, including QRIS. It is important to maintain security in use and prevent potential fraud via QR codes. Security is an important factor in payment systems. The challenge in this regard is ensuring that QRIS has a strong layer of security to protect users' data and prevent fraud or cyber-attacks. The occurrence of a criminal act of fraud by replacing QRIS at the Blok M Square Mosque, Al-Azhar Mosque, and around 38 other mosques with private QRIS is one of the challenges in how QRIS maintains its level of security. The fraud was carried out by simply changing the QRIS code sticker (https://www.bbc.com, 2023; https://www.merdeka.com, 2023)

Fourth is inter-platform competition. There are many digital wallet and payment application providers in Indonesia. The challenge, in this case, is ensuring that QRIS can work across platforms and not be limited to one particular service provider. Integration with different digital wallets, payment services, and backend systems is also a challenge. There is a need for clear industry standards and collaboration between stakeholders to ensure smooth interoperability between the various platforms within QRIS. Various studies illustrate that e-wallets are a payment instrument that is widely used, however, the growth and increase in the number of QRIS users as an alternative to digital payment instruments also illustrates that QRIS is one of the competitors to e-wallets by offering transaction services for free.

Fifth is the challenge in the field of regulations and policies that support the implementation of QRIS in Indonesia. Legal clarity is needed regarding the use of QRIS, consumer protection, and data privacy, as well as an adequate framework to ensure the continuity and growth of QRIS as an integral part of the wider payment system. The regulations that have been presented above still do not accommodate the interests of using QRIS in Indonesia. By addressing these challenges, QRIS has the potential to become an integral part of Indonesia's payment system and provide significant benefits to users, businesses, and the economy as a whole.

QRIS Opportunities in Payment Systems

The opportunity for QRIS in Indonesia is very large because several factors support the growth in the use of QRIS as a digital payment tool that is very easy and effective for transactions. QRIS' growth is also influenced by the large market potential in Indonesia because it has a population of 270 million

people. The number of smartphone users continues to increase, thus providing great opportunities for the future development of QRIS. There is even the development of the QRIS standard to be able to meet the needs of the community, namely QRIS Consumer Presented Mode (CPM), and the development of the QRIS Merchant Presented Mode (MPM), namely adding several features to accommodate QRIS Crossborder (international) transactions, as well as QRIS Cash Withdrawal and Deposit Transfers (TTS).

QRIS has the same opportunities as other digital payment instruments such as e-wallets. QRIS has advantages compared to other means of payment, namely, QRIS provides ease of use by eliminating the need to carry lots of cash or physical cards (Tan & Husny, 2020). Users only need to use a compatible payment application to scan the QR code and quickly complete the transaction. QRIS also enables individuals who previously did not have access to formal banking services to make electronic payment transactions using digital wallets or virtual accounts. QRIS can reduce transaction costs for businesses and merchants. By using QRIS, people don't have to pay a lot of money for special payment devices or EDC machines. It is enough to print the QR code and display it at the place of business.

The development of the digital payment ecosystem provides space for QRIS to grow and develop (Kraus et al., 2021). QRIS is utilized by many merchants consisting of MSME actors as a digital promotional tool for businesses and traders (Seputri & Yafiz, 2022). QRIS can offer special discounts or loyalty programs via QR codes, which can encourage customers to use these payment methods and build long-term relationships with customers. QRIS can also be used as a marketing strategy and digital business innovation by integrating various types of digital wallets or e-wallets, banking, technology companies, and payment services into one compatible system. Therefore, QRIS has a very good opportunity in transforming the payment system in Indonesia. With support from the government, industry players, communities, associations, and others. QRIS can play an important role in increasing the efficiency, inclusion, and advancement of digital payments in Indonesia (Aisyah et al., 2023).

CONCLUSION AND RECOMMENDATION

The existence of QRIS in Indonesia can have a positive impact on economic growth and digital business development. Digital payments through QRIS are more efficient and structured, thereby increasing transparency, and convenience, reducing transaction costs, and increasing access to financial services for the public. QRIS has the potential to become a commonly used payment method and bring benefits to Indonesia's digital economy. However, the implementation of QRIS as a digital payment system in Indonesia still faces many challenges, such as limited internet access in several regions, digital infrastructure that is not yet spread evenly across all regions in Indonesia, competition with other digital payment systems, security aspects in its use which have potential for fraud or data theft and lack of understanding regarding QRIS. Apart from the challenges, QRIS has enormous opportunities because it is one of the instruments in encouraging digital economic acceleration that is inclusive and efficient. QRIS has huge market potential because there is an increasing number of smartphone users every year. QRIS provides ease of use by eliminating the need to carry a lot of cash, physical cards, or loose change. The recommendation in this research is that there needs to be active and massive outreach carried out by Bank Indonesia, OJK, and other financial institutions so that the public can know about QRIS so that it can be easy for the public to use QRIS

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