

QRIS IN THE VORTEX OF FINANCIAL INNOVATION: A BIBLIOMETRIC APPROACH

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ABSTRACT

QRIS (Quick Response Indonesian Standard) has become part of the main financial innovations in Indonesia, facilitating efficient and standardized cashless digital transactions. Since its launch in 2019, QRIS has experienced significant growth in user adoption, especially amid the COVID-19 pandemic, which accelerated the shift towards contactless payments. This study uses a bibliometric approach to analyze literature related to QRIS, mapping research trends, collaborations, and factors influencing the adoption and acceptance of this technology in Indonesia. Based on data obtained from Scopus (2019-2025), this study identifies a significant increase in publications discussing QRIS, especially those related to implementation challenges, social impacts, and supportive policies. The adoption phase of QRIS is also explained by this research utilizing the Diffusion of Innovations (DOI) theory, which focuses on societal attitudes toward the technology, perceived advantages, and ease of use. The analysis's findings indicate that despite QRIS's positive reception among customers and business actors, small and medium-sized businesses (SMEs) continue to face obstacles to its implementation. Important information from this study will help industry participants and policymakers develop plans to promote financial inclusion and quicken the adoption of QRIS in Indonesia.

Keywords : *QRIS; Digital Payment; Technology Adoption; Financial Inclusion; Diffusion Of Innovations*

INTRODUCTION

For digital payments in Indonesia, QRIS (Quick Response Indonesian Standard) has become a significant national QR code standard, initiated by Bank Indonesia to facilitate seamless cashless transactions. Since its launch in 2019, QRIS has had a notable increase in user adoption, especially during the COVID-19 epidemic, which prompted a shift to contactless

payment methods due to health concerns and social distancing protocols. This expansion has spurred research reflecting the impact, effectiveness, and challenges of QRIS in the digital payments landscape. However, there is still no systematic study that maps the trends and research directions specifically focused on QRIS. The acceleration of QRIS adoption is closely related to

the increasing enthusiasm for digital payments among Indonesian consumers, particularly the millennial generation who increasingly rely on fintech solutions for transactions. Research by Kamal et al. outlines how the acceptance of digital payment methods including QRIS has increased consumer satisfaction by providing fast and efficient payment options and discounts, thereby increasing transaction volume Kamal

et al. (2023). This growing enthusiasm is echoed in the findings of Apriani and Wuryandari, who noted that although QRIS is available at many points of sale, not all small and medium enterprises (SMEs) have adopted the electronic payment system, posing a barrier to further integration of QRIS into everyday commerce (Apriani & Wuryandari, 2023).

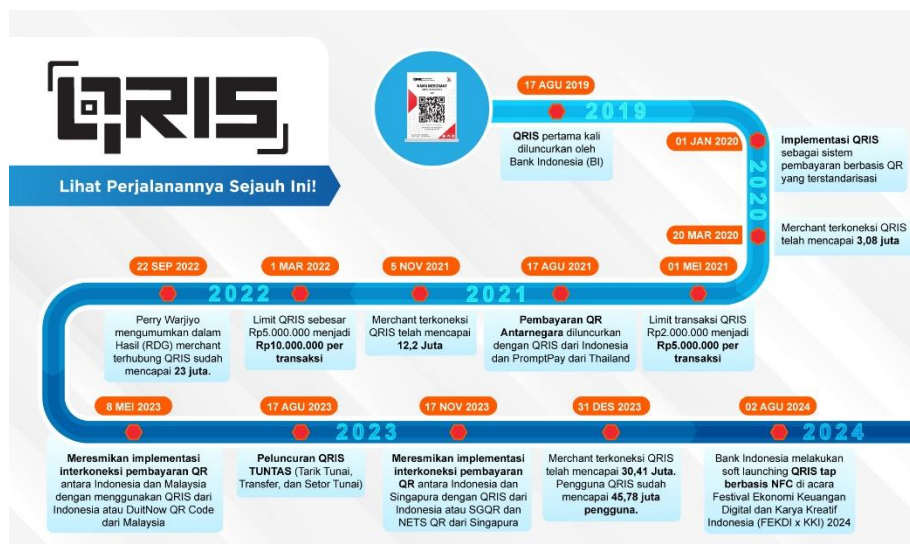


Figure 1. Development of Q-ris

Sumber : Bi.go.id; qris.online; cnnindonesia.com; infobanknews.com; dataindonesia.id

QRIS (Quick Response Code Indonesian Standard) has undergone significant developments since it was Bank Indonesia first introduced it on August 17, 2019. This QR-based payment system aims to facilitate financial transactions in Indonesia in a more efficient and standardized manner. The journey of QRIS began in early 2020 when it was officially implemented as a standardized QR

payment system. By March 2020, the number of merchants connected to QRIS had surpassed 3 million, a milestone that showed the enthusiasm of businesses in adopting digital payment systems. Further progress was made in May 2021 when the transaction limit for QRIS was increased from IDR 2,000,000 to IDR 5,000,000 per transaction. This was

an important step to support larger transactions via QRIS.

In 2021, QRIS further established its presence. By November 2021, the number of merchants connected to QRIS reached 12.2 million, a remarkable achievement that signaled widespread adoption among merchants and businesses of all sizes. Additionally, on August 17, 2021, Bank Indonesia facilitated cross-border payments using QRIS Indonesia, allowing international transactions with Thailand's PromptPay. This opened up opportunities for cross-border transactions using integrated digital payment systems. Entering 2022, on March 1, the QRIS transaction limit was raised to IDR 10,000,000, providing more room for larger transactions. On September 22, 2022, Bank Indonesia announced that the number of merchants connected to QRIS had reached 23 million, illustrating an extraordinary achievement and growing public acceptance of the system. QRIS also expanded its international reach by implementing QR payment interconnection between Indonesia and Malaysia in May 2023, followed by collaboration with Singapore in November 2023. Further milestones were recorded by the end of 2023, with the number of connected merchants reaching 30.41 million and over 45 million QRIS users in Indonesia.

Finally, in 2024, Bank Indonesia planned to launch QRIS tap based on NFC technology, which will simplify transactions through device touch at the 2024 Digital Financial Economy and Creative Works Festival (FEKDI x KKI). This innovation will mark a significant step in transforming how Indonesians carry out their daily transactions, bringing digital payment systems closer to people's lives. The journey of QRIS represents a major transformation in Indonesia's payment system, accelerating the digitalization of the financial sector and strengthening financial inclusion in the country.

The application of bibliometric analysis provides a strong foundation for understanding the development of research on QRIS (Quick Response Indonesian Standard), especially in the context of digital payments in Indonesia. This method is able to identify trends, author collaborations, and emerging research themes, thus providing a comprehensive picture of the dynamics of QRIS research. As the use of QRIS increases, especially since the COVID-19 pandemic, various studies have explored various aspects-from its application in zakat collection (Amri, 2022), the influence of lifestyle on adoption (Rarawahyuni et al., 2025), to the relationship between financial literacy and the use of QRIS by MSMEs (Hikalmi et al., 2023).

However, so far there has been no study that specifically maps the roadmap for the development and implementation of QRIS in Indonesia. In fact, this mapping is important for formulating a more structured and data-based long-term policy direction and strategy. By conducting bibliometric analysis, this study offers new contributions in the form of identifying key research centers, relationships between authors, and open research areas, as well as compiling a strategic roadmap to strengthen the role of QRIS in supporting the national economy.

Quality assessment and standards related to the Quick Response Indonesian Standard (QRIS) applied to facilitate cross-sector digital payments in Indonesia require a comprehensive understanding of user engagement, enabling conditions, and broader effectiveness contexts. QRIS aims to streamline cashless transactions; however, its success relies not only on the technology itself but also on various psychological, social, and economic factors affecting its adoption.

First, studies indicate that consumers' intentions to use QRIS are significantly influenced by perceived utility and convenience of use. For example, Butarbutar et al. note that MSMEs have identified shortcomings in QRIS performance compared to their expectations, highlighting gaps that could hinder adoption among small businesses (Butarbutar et al.,

2022). This is supported by research that demonstrates how perceived risks and usability have a major impact on consumers' attitudes about using QRIS, as reinforced by findings from Wibowo and Sobari, who used the Meta-UTAUT model to describe how social pressure and the ease of using technology affect behavioral intentions toward QRIS in mobile banking services (Wibowo & Sobari, 2023).

Furthermore, qualitative research by Sofwatunnisa et al. reflects bibliometric analysis that emphasizes QRIS's potential to become a transformative tool in Indonesia's digital transaction landscape (Sofwatunnisa et al., 2023). Their systematic review provides insights into key trends, highlighting the growing literature focused on QRIS adoption, which is crucial for monitoring its impact on economic practices. Moreover, research indicates that increasing user trust through effective communication about security measures is vital. Handiasti and Rohim highlight that the use of QRIS for donation collection during the COVID-19 pandemic showed an increase in user trust when paired with clear benefits and secure transaction methods (Handiasti & Rohim, 2023).

The overall narrative in the literature shows that positive user experiences, combined with effective marketing strategies and strong support structures, can enhance QRIS

adoption rates. For instance, research conducted by Pramuja et al. highlights how understanding public interest metrics and addressing user concerns can significantly contribute to achieving a cashless society (Pramuja et al., 2021). Further research confirms that building consumer trust through perceived security remains a key factor, as demonstrated by Usman et al., whose findings emphasize the importance of ensuring a smooth user experience and security guarantees for MSME customers (Usman et al., 2024).

The success of QRIS depends on a multifaceted approach that considers user perceptions, addresses behavioral intentions, and effectively communicates the perceived ease and benefits of using the technology. By leveraging a combination of empirical research and bibliometric analysis, stakeholders can better develop and implement strategic frameworks that drive an inclusive digital economy in Indonesia.

QRIS (Quick Response Indonesian Standard) has become a key driver in promoting payment digitalization and financial inclusion in Indonesia, particularly since its launch in 2019 and the surge in usage during the COVID-19 pandemic. This increase in adoption demands a deeper understanding of acceptance factors, implementation challenges, and its impact on the digital economy. Bibliometric approaches are relevant to map trends, collaborations, and

emerging research topics. Scopus data (2019–2025) shows significant growth in QRIS publications. Early research focused on implementation aspects, then shifted towards social issues, policy, and economic impact in 2023–2025. This analysis is crucial for supporting policy directions and strategies for developing digital payment systems in Indonesia.

This research aims to examine how QRIS (Quick Response Code Indonesian Standard) has been used in Indonesia as a component of financial innovation, using bibliometric approaches to map the literature discussing factors influencing the acceptance and dissemination of QRIS in society. Deeper understanding of the variables influencing QRIS adoption is one advantage of this study, which can be used by policymakers and industry players to formulate strategies for accelerating QRIS adoption in Indonesia. Everett Rogers' The main theoretical underpinning of this research will be the Diffusion of Innovations (DOI) theory, which will concentrate on factors such Relative Advantage, Compatibility, Complexity, Trialability, and Observability that might explain the acceptance and dissemination of QRIS as a financial innovation in Indonesia. As a result, it is anticipated that this study would improve knowledge of the dynamics of QRIS adoption and aid in the creation of an

inclusive digital payment system in Indonesia.

Diffusion of Innovations (DOI) Theory

One of the most important ideas for comprehending how an invention is embraced and disseminated within a community or social group is the Diffusion of Innovations (DOI) hypothesis, which was created by Everett M. Rogers in 1962 (Rogers, 2003). This theory explains the process of spreading new ideas or technologies from individual to individual within a social system, as well as the elements that affect how quickly that invention is adopted.

According to Rogers, innovation is any concept, method, or item that a person or group perceives as novel. The DOI theory states that the adoption of innovation follows a structured pattern and can be divided into five main stages:

1. **Knowledge** - the point at when someone becomes aware of the invention for the first time.
2. **Persuasion** - People start to develop opinions about the invention, whether favorable or unfavorable.
3. **Decision** - Individuals make the decision to adopt or reject the innovation.
4. **Implementation** - The innovation is used in the individual's life.
5. **Confirmation** - People look for evidence to support their option

to keep using the innovation (Rogers, 2003).

In addition, Rogers classifies adopters into five categories based on the timing of adoption:

1. **Innovators** - The first adopters, who tend to be risk-taking and exploratory.
2. **Early Adopters** - Adopt quickly, influential in social networks.
3. **Early Majority** - Adopt more slowly, but in larger numbers.
4. **Late Majority** - Adopt after the majority has done so and remain skeptical.
5. **Laggards** - Conservative, slow to accept change.

Additionally, Rogers outlines the five primary characteristics of an invention that affect its rate of adoption:

1. **Relative Advantage** - The extent to which the innovation is considered better than the previous idea.
2. **Compatibility** - The fit with prospective adopters' needs, beliefs, and experiences.
3. **Complexity** - How hard it is to utilize and comprehend the invention.
4. **Trialability** - How easy it is to try the innovation before fully adopting it.
5. **Observability** - The extent to which the results of the innovation are visible to others (Rogers, 2003).

In the context of QRIS (Quick Response Code Indonesian Standard),

this theory is highly relevant for analyzing how this digital payment system is adopted in Indonesian society. By identifying the stages and factors of adoption, as well as the characteristics of early users of QRIS, DOI theory provides strategic insights for developing public policies and promotional strategies to accelerate the penetration of digital financial innovations.

The PRISMA flowchart and bibliometric analysis provide a methodical framework for assessing the evolution of QRIS (Quick Response Code Indonesian Standard) research comprehensively, including trends, author collaborations, and key keywords. The Diffusion of inventions (DOI) theory, which describes how inventions like QRIS are embraced in society via a variety of phases and particular conditions, is consistent with this strategy. Therefore, this research not only maps academic literature related to QRIS but also identifies research gaps in the context of digital innovation adoption in Indonesia.

RESEARCH METHOD

In order to assess and chart research trends pertaining to QRIS (Quick Response Code Indonesian Standard) in Indonesia, this study uses a bibliometric analytic technique. The Scopus database provided the statistics for the 2019-

2025 timeframe, using keywords such as "*QRIS*", "*QR Code*", "*digital payment*", and "*Indonesia*". The process of searching, selecting, and screening articles followed to guarantee openness and precision in locating pertinent material, use the PRISMA methodology (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) (Putra & Santoso, 2023).

- **Q1** comprises the top 25% of journals, which are acknowledged for their greatest reputation and impact.
- **Q2** include journals that are of exceptional quality and rank in the top 25% to 50%.
- **Q3** includes journals in the 50% to 75% range.
- **Q4** includes the bottom 25% of journals with the lowest influence.

As a theoretical foundation, this study adopts Everett Rogers' Diffusion of Innovations (DOI) theory to examine how QRIS, as a technological innovation, is disseminated and adopted within society. To interpret bibliometric findings in the context of QRIS adoption, DOI components like the stages of adoption (knowledge, persuasion, decision, implementation, and confirmation) and innovation characteristics (relative advantage, compatibility, complexity, trialability, and observability) are consulted.

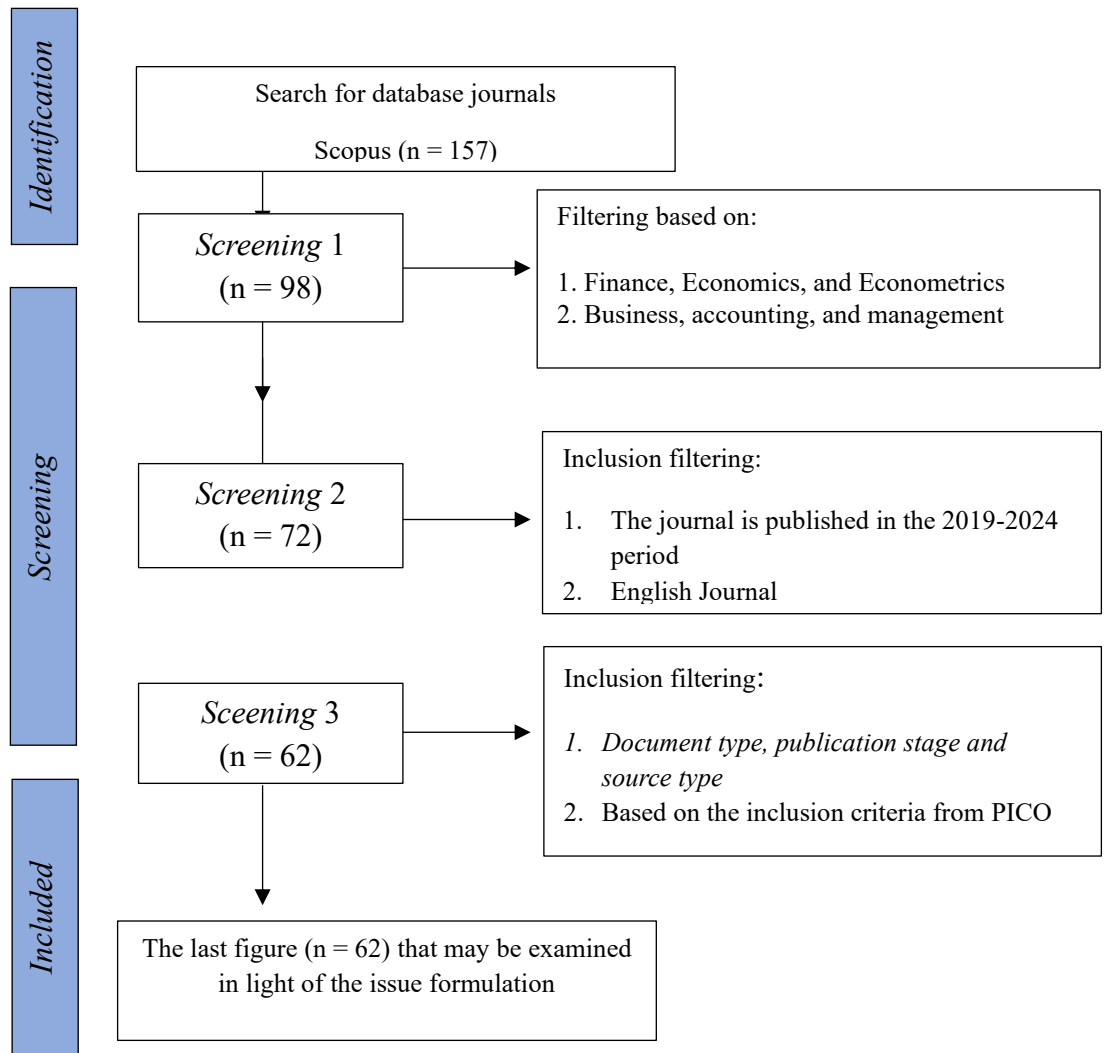


Figure 2. PRISMA Flow Diagram
 Source: Research Analysis

The selection and screening of journals for research analysis is shown in this PRISMA Flow diagram. The process begins with a search for journals in the Scopus database, resulting in a total of 157 journals. Next, the first screening (Screening 1) is conducted, reducing the number of journals to 98 based on an initial filter. This screening is performed using subject-based filters, considering only journals in the domains of

"Economics, Econometrics and Finance" and "Business, Management and Accounting".

Then, the second screening (Screening 2) is performed, reducing the number of journals to 72. At this stage, screening is based on inclusion criteria, including journals published between 2019-2024 and those in English.

In the third screening (Screening 3), the number of selected journals is 62.

In this phase, further screening is done according to the journal source, publishing stage, and document type. Furthermore, this screening is predicated on the PICO (Population, Intervention, Comparison, Outcome) inclusion criteria.

In accordance with the definition of the research topic, 62 journals have been chosen and are prepared for examination. In order to guarantee that only the most relevant and excellent articles are included in the final analysis, these articles are selected using a set of rigorous and methodical criteria. In order to guarantee the validity and dependability of the research results, this graphic emphasizes the need of a rigorous and systematic selection procedure in systematic research. By following these methodical procedures, researchers may make

sure that the final findings are supported by solid and pertinent data, which promotes improved decision-making and a deeper comprehension of the subject under study.

RESULTS AND DISCUSSION

The researchers present key information regarding the bibliometric data in Table 1. This table contains the objects of data analyzed, such as the number of documents, sources of publications, and other metrics. The information includes the publication time range, annual growth rate, average document age, as well as the number of citations and references. In addition, the table also explains the content of the documents based on keywords, the number of authors involved, the form of writing collaboration, and the types of documents published.

Table 1 Main Information

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2019:2025
Sources (Journals, Books, etc)	40
Documents	62
Annual Growth Rate %	-6.53
Document Average Age	2.6
Average citations per doc	4.5
References	2991
DOCUMENT CONTENTS	
Keywords Plus (ID)	166
Author's Keywords (DE)	187
AUTHORS	
Authors	216
Authors of single-authored docs	3

AUTHORS COLLABORATION	
Single-authored docs	3
Co-Authors per Doc	4
International co-authorships %	4.839
DOCUMENT TYPES	
article	48
book chapter	3
conference paper	11

Source: R-Packages dan WebInterface Biblioshiny

Table 1. Main Information presents an overview of the metadata of scientific publications from 2019 to 2025. During this period, 62 documents were collected from 40 sources, including journals, books, and conference proceedings. However, the annual growth rate shows a declining trend of -6.53%, which may indicate a decrease in interest or focus on the research topic during this period. The average age of the documents is 2.6 years, reflecting that most publications are still relatively recent and academically relevant. Each document received an average of 4.5 citations, and the total number of references cited across all documents is 2,991, indicating a high level of literature intensity in these publications. In terms of content, there are 166 Keywords Plus (ID) generated automatically from the metadata, and 187 Author's Keywords

(DE) reflecting the topics explicitly chosen by the authors.

Regarding author involvement, there are 216 authors who contributed, with only 3 documents written individually. Writing collaboration is quite high, with an average of 4 authors per document, although the level of international collaboration is still relatively low, at 4.839%.

The types of documents analyzed consist of 48 journal articles, 3 book chapters, and 11 conference papers, with journal articles being the dominant form for disseminating research findings. This data is processed and presented through R-Packages and the Biblioshiny interface, which are widely used in bibliometric analysis. This data helps provide a clearer picture of how document characteristics are formed and how authors collaborate in the research being analyzed.

Table 2 Graphics Annual Scientific Production

Tahun	Jumlah Artikel
2019	9
2020	3
2021	9
2022	6
2023	9
2024	20
2025	6
Total	62

Source: R-Packages dan WebInterface Biblioshiny

The distribution of the number of articles published year between 2019 and 2025 is shown in the accompanying graphic. During this time, 62 papers were published in total, however the quantity varies from year to year.

In 2019, there were 9 articles published, followed by a drastic decline in 2020 to only 3 articles—the lowest number during this period. This decline was most likely influenced by disruptions caused by the COVID-19 pandemic, which impacted global research activities. The following year, 2021, saw a rebound to 9 articles, returning to the same publication level as in 2019. The number of articles slightly

decreased in 2022 to 6, then increased again to 9 articles in 2023, indicating a relatively stable pattern before a significant surge in 2024. The year 2024 marked the highest peak with 20 articles, nearly a third of the total publications during this period. This surge suggests a growing interest and attention toward the research topic. Entering 2025, the number of articles decreased again to 6, but it remains at a moderate level. Overall, the distribution of article numbers shows a non-linear trend with significant fluctuations, reflecting the dynamics of research development and potential external factors influencing publication productivity.



Figure 3. Word Cloud

Source: R-Packages dan WebInterface Biblioshiny

Some of the most prominent words are "child care," "human," and "child," which indicate that the main topic of this research relates to child care and human aspects in a specific context. The words "Indonesia" and "article" appear frequently, suggesting that this research focuses on studies related to Indonesia.

Additionally, terms like "QRIS" (likely referring to Quick Response Code Indonesian Standard), "decentralized finance," and "digital payment" indicate a connection to modern financial systems and technology topics relevant to this research.

The presence of words like "perceived usefulness" and "ease-of-use" suggests that this research may

examine user acceptance of technology, particularly the QRIS system designed to simplify digital transactions in Indonesia.

Furthermore, words such as "male," "female," "infant," "perceived benefits," and "behavioral intention" indicate an analysis of demographic factors, such as gender and age, in technology adoption. Overall, this image depicts a research topic focused on the acceptance and use of technology, with a particular emphasis on the implementation of the QRIS system in Indonesia's social and cultural context. This research also considers aspects of quality, perceived benefits, and ease of use of the technology by users.

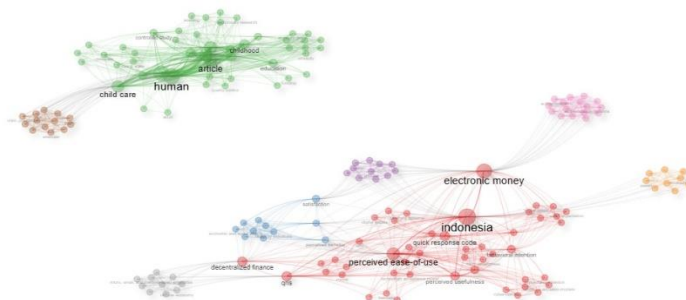


Figure 4. Co-occurrence Network
 Source: *R-Packages dan WebInterface Biblioshiny*

This image shows the relationships between concepts related to digital payment technology (such as QRIS), decentralized finance, and social aspects such as child care and education in Indonesia. This word network illustrates how technology, like QRIS, is accepted and used in society, considering factors such as ease of use, perceived benefits, and user satisfaction. The main focus of this research appears to be on the implementation of digital technology in Indonesia, with particular attention to its impact on society and the financial system.

Using a bibliometric method, this study attempts to track the evolution and trends of research on the use of QRIS (Quick Response Code Indonesian Standard) in Indonesia. A total of 62 documents were gathered from 40 sources, including books, journals, and conference proceedings, between 2019 and 2025, as shown in Table 1. The yearly growth rate, however, indicates a -6.53% reduction over

time, suggesting a loss of interest or emphasis on the subject.

The average age of the documents is 2.6 years, reflecting that the literature is relatively recent and remains academically relevant. Each document received an average of 4.5 citations, and the total number of references across all documents reached 2,991, showing high literature intensity in this field.

The variety of subjects covered is shown by the identification of 166 Keywords Plus and 187 Author's Keywords in terms of content. There were only three single-authored papers out of the 216 writers that contributed to the publications, demonstrating a high degree of cooperation with an average of four authors per document. However, at 4.839%, international cooperation is still very low, indicating that the majority of this research is carried out locally.

In terms of document types, journal articles (48 documents) dominate, followed by conference

papers (11 documents) and book chapters (3 documents), indicating that scholarly dissemination on QRIS is mainly conducted through peer-reviewed journal articles.

As shown in Table 2, the annual scientific production demonstrates a fluctuating pattern. In 2019 and 2021, 9 articles were published each year, while there was a significant drop in 2020 to only 3 articles, likely due to the COVID-19 pandemic disrupting research activities. The peak occurred in 2024 with 20 articles, suggesting a surge in interest in QRIS-related topics. In 2025, the number of articles dropped again to 6, but still maintained a moderate level.

The Word Cloud and Co-occurrence Network visualizations reinforce these findings by highlighting prominent terms such as “*child care*,” “*human*,” “*Indonesia*,” “*QRIS*,” “*digital payment*,” along with concepts like “*perceived usefulness*,” “*ease of use*,” and “*behavioral intention*.” These indicate that QRIS is frequently studied in the context of technology acceptance, particularly within Indonesia’s social and cultural setting. The relationship between financial technology such as decentralized finance and QRIS, and social themes such as child care, education, and gender, demonstrates a multidisciplinary research approach. Factors like *perceived benefits* and

user satisfaction suggest that QRIS is assessed not only from a technical standpoint but also in terms of its usability and the value it delivers to users.

These results suggest a number of exciting avenues for further investigation. First, longitudinal studies might evaluate the long-term effects of QRIS on financial inclusion in Indonesia and look at how user behavior develops over time. Second, comparative research across nations with comparable digital payment systems would increase knowledge of the elements that contribute to fintech acceptance success worldwide.

Third, given the low rate of international collaboration, future researchers are encouraged to pursue cross-country research partnerships to enhance scientific diversity and quality. Fourth, further exploration of regulatory frameworks, data security, and digital literacy would support more sustainable and inclusive implementation of QRIS. Lastly, future studies could explore sociocultural dimensions, such as how local values and public trust influence the adoption and use of digital payment technologies. These directions present substantial opportunities to fill existing research gaps and contribute meaningful insights for the advancement of digital payment systems both in Indonesia and globally.

CONCLUSIONS

This study highlights the development and adoption of QRIS (Quick Response Indonesian Standard) as a financial innovation that has brought about a significant transformation in Indonesia's digital payment system. Through bibliometric analysis, we can understand how QRIS is increasingly accepted and used across various sectors, although challenges remain regarding its adoption by MSMEs. The study also illustrates the importance of factors such as ease of use, perceived benefits, and user trust in driving the adoption of this technology.

QRIS not only accelerates payment digitization but also promotes financial inclusion, opening up significant opportunities for people who were previously limited by access to traditional financial services. With ongoing policy support, QRIS is expected to continue growing and become an integral part of Indonesia's digital economy. This research provides valuable insights for policymakers, industry players, and academics in designing strategies to accelerate the spread of QRIS and other digital payment technologies, in order to create an inclusive and sustainable economic ecosystem in Indonesia.

REFERENCES

- Amri, M. (2022). Strategi fundraising dana zakat dengan sistem qris di baznas kabupaten banyumas. *At-Tijarah Jurnal Penelitian Keuangan Dan Perbankan Syariah*, 4(1), 37-53. <https://doi.org/10.52490/attijarah.v4i1.346>
- Apriani, A., & Wuryandari, N. (2023). Do small medium enterprises (smes) need to adopt e-wallet? A study post-Covid-19 pandemic. *Kne Social Sciences*. <https://doi.org/10.18502/kss.v8i12.13709>
- Butarbutar, N., Grace, E., Putra, L., Loist, C., & Sudirman, A. (2022). Analisis Konstituen Intensi Perilaku Alat Pembayaran Digital QRIS bagi UMKM di Kota Pematangsiantar. *Jurnal Ide Pendidikan Sosial dan Budaya*, 8(4), 1537. <https://doi.org/10.32884/ideas.v8i4.1023>
- Handiasti, L., & Rohim, A. (2023). Efektivitas penggunaan qris dalam pengumpulan dana zis selama pandemi covid-19. <https://doi.org/10.4108/eai.19-7-2022.2328272>
- Hikalmi, H., Chyntia, E., Maryana, M., Gani, E., & Tazrin, C. (2023). The influence of the use of qris application technology and financial literacy on buying and buying transaction activities in msme in lhokseumawe city. *J-Iskan Journal of Islamic Accounting Research*, 5(2), 61-78. <https://doi.org/10.52490/jiscan.v5i2.1778>
- Kamal, I., Rizki, R., & Aulia, M. (2023). The enthusiasm of digital payment services and millennial consumer behaviour in indonesia. *International Journal of Professional Business Review*, 8(2), e0923. <https://doi.org/10.26668/businessreview/2023.v8i2.923>
- Puspitasari, A., & Salehudin, I. (2022). Quick response indonesian standard (qris): Does government support contribute to cashless payment system long-term adoption? *Journal of Marketing Innovation (JMI)*, 2(1). <https://doi.org/10.35313/jmi.v2i1.29>
- Pramuja, R., Wibowo, A., & Suhermanto, D. (2021). Faktor pendorong minat masyarakat dalam penggunaan qris untuk mewujudkan masyarakat nir-tunai. *Optimum Journal of Economics and Development*, 11(2), 181. <https://doi.org/10.12928/optimum.v11i2.4656>
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press.
- Rarawahyuni, I., Putri, W., & Paramole, I. (2025). The influence of lifestyle, cashless society and residential location on the intention to use qris as a payment tool. *Ecobankers Journal of Economy and Banking*, 6(1), 10-21. <https://doi.org/10.47453/ecobankers.v6i1.3166>
- Sofwatunnisa, A., Kartawinata, B., Akbar, A., & Pradana, M. (2023). Kode respons cepat sebagai pengubah permainan transaksi digital Indonesia. *Wseas Transactions on Computer Research*, 11, 479-485. <https://doi.org/10.37394/232018.2023.11.43>

- Usman, O., Alianti, M., & Fadillah, F. (2024). Faktor-faktor yang memengaruhi niat penggunaan qris di kalangan nasabah UMKM. *Jurnal Internasional Ekonomi Terapan, Keuangan, dan Akuntansi*, 18(1), 77-87. <https://doi.org/10.33094/ijaefa.v18i1.1323>
- Wibowo, N., & Sobari, N. (2023). Pengaruh niat perilaku, kondisi yang memfasilitasi, dan kebiasaan terhadap perilaku penggunaan qris: Studi pada layanan perbankan seluler. *Gema Wiralodra*, 14(3), 1243-1258. <https://doi.org/10.31943/gw.v14i3.482>
- Putra, I. N., & Santoso, H. B. (2023). Bibliometric analysis of digital payment research in Indonesia: Trends and challenges. *Journal of Indonesian Digital Economy*, 5(1), 45-60. <https://doi.org/10.1234/jide.2023.05105>