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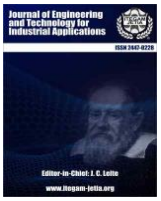

RESEARCH ARTICLE OPEN ACCESS

A BIBLIOMETRIC OF FINANCIAL TECHNOLOGY QR CODE AND QRIS RESEARCH

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ABSTRACT

This study aims to determine the development of the use of technology-based financial transactions or Fintech, especially in QR codes and QRIS Fintech. This research discusses parameters related to many previous studies related to financial technology QR codes and QRIS. The bibliometric method identifies and analyzes publication patterns, the most productive authors, the journals that publish the most related articles, and research trends related to Fintech (QR Code and QRIS). Data collection was conducted in September 2023 on the Scopus database and data analysis using Rstudio, Biblioshiny, and VOSviewer applications. The results of this bibliometric analysis provide important insights into the development of research related to Fintech (QR Code and QRIS). It was found that the discussion of the two themes was still minimally researched as seen from the results of the QR Code theme 16 published documents and QRIS 7 published documents.

I. INTRODUCTION

As time goes by, the world of technology is increasingly forced to continue to develop. This technological development extends to the world of finance which is currently known as financial technology [1,2]. So far, the usual use of financial transactions is using money in cash. but with the development of technology, there have been many financial transaction activities using technology or what is commonly known as Fintech [3]. Financial transactions using technology continue to experience an increase and interest from the public [4]. Until it affects the behavior of people who tend to always follow trends in financial transaction systems that are much easier and faster with the help of technology [5]. Technological developments also encourage people to have new habits and mindsets. At this time public demand for a financial system that can accommodate every need of the community is fast, guaranteed security, easy to use, and efficient, thus encouraging the development of financial system innovation very rapidly [6],[7].

Current financial developments require many non-cash financial transaction methods to be issued to facilitate the public in conducting financial transactions using transaction methods such as QR codes Indonesia also publishes its own QR Code standard commonly known as QRIS (Quick Response Code Indonesian Standard). So, this study aims to determine the development of the use of technology-based financial transactions or Fintech, especially in QR Code and QRIS Fintech. This research discusses parameters related to many other studies related to financial technology QR codes and QRIS.

II. THEORETICAL REFERENCE

II.1 FINANCIAL TECHNOLOGY (FINTECH)

Fintech comes from the term Financial Technology or financial technology is the use of technology in the financial system that creates new products, services, and technology, or businesses that have an impact on the stability of the financial system, smoothness, and security of the payment system [6, 8]. Technological developments continue to provide innovations related to financial technology, to meet the needs of society [9]. Fintech is a combination of financial services with technology that originally had to be face-to-face transactions, then with the existence of technology can now make transactions remotely, anytime, and anywhere. The application of Fintech is a popular

method of financial transaction services in the digital era, this situation is then expected to encourage several people to have easier access to financial services [10].

II.2 QUICK RESPONSE CODE (QR CODE)

Quick Response Code often called QR Code or QR Code is a kind of two-dimensional symbol developed by Denso Wave which is a subsidiary of Toyota, a Japanese company in 1994 [11]. The purpose of this QR Code is to convey information quickly and also get a response quickly [12]. At first, the QR Code was used for tracking vehicle parts for manufacturing. But now, it has been used for commercials aimed at cell phone users [13]. QR Code is the development of barcodes or bar codes that are only able to store information horizontally while QR Code can store more information, both horizontally and vertically [14].

II.3 QUICK RESPONSE CODE INDONESIAN STANDARD (QRIS)

Quick Response Code Indonesian Standard commonly known as QRIS is a payment system launched or pioneered by Bank Indonesia and the Indonesian Payment System Association [15]. QRIS is a non-cash transaction application through a smartphone application [15]. QRIS is a shared delivery channel payment system similar to the operation of the QR code for non-cash resin payments which is part of payment transactions in the form and type of electronic money (e-money) [16],[17]. Therefore, QRIS becomes an electronic payment system that becomes the standard in all transactions[18]. Thus, each merchant only needs one QR code to make all transactions through any payment software [15].

III. MATERIALS AND METHODS

In this study, a bibliometric approach was used to review the literature on Fintech (QR Code and QRIS). Bibliographic techniques are research methods that involve quantitative analysis of bibliographies or related documents. This method is used to analyze the volume, distribution, and characteristics of scientific publications, including the impact of journal articles, conferences, books, authors, journals, and keywords. The research data for this study are international journal searches in the Scopus database. Keywords used in Scopus research a) Fintech and QR code. (b) Quick Response Code Indonesian Standard. Data collection was carried out in September 2023. The procedure was used to obtain the results of data analysis using the Rstudio, Biblioshiny, and VOS viewer applications.

IV. RESULTS AND DISCUSSIONS

IV.1 QR CODE

IV.1.1 Main Information

Figure 1 provides an overview of the data sources used in the bibliometric analysis of this article. It is confirmed that 16 articles from 45 authors conducted research related to QR Code Fintech. Based on Figure 1 and Table 1, there are 16 research articles published from 2019 to 2023. In Table 1, the data from the annual Scientific Production results of the development of Fintech QR code-themed article production is still small, namely only 16 documents. QR code Fintech research was first discussed in 2019, so it can be said that there is still little research on QR code Fintech in 2020 published 4 articles, in 2021 published 5 articles, in 2022 published 3 articles, and in 2023 published 2 articles.

Figure 1: Main information.
Source: Authors, (2024).

Table 1: Annual Scientific Production.

Year	Articles
2019	1
2020	4
2021	6
2022	3
2023	2

Source: Authors, (2024).

IV.1.2 Three-Field Plot

Figure 2 three-pole graph characterizes the allocation by country (AU_CO) on the left, Keyword (DE) in the middle, and Additional Keyword (ID) on the right. the three-pole graph was created to reflect the percentage of topics raised by previous researchers for each country related to QR Code Fintech. It can be seen that AU_CO only has 6 countries that have recently researched Fintech QR codes, namely Ghana, Australia, India, Tanzania, USE, Korea, Malaysia, Canada, and North Macedonia. Looking at the DE and ID keywords that are often used for the development of this research are Fintech, mobile payments, digital transformation, crypto-exchanges, blockchain, mobile payments, disruption, 2fa, biometric fingerprint, QR Code, covid19, digital banking, digital lization, digital India, food supply, electronic money, authentication, blockings, competition, biometrics, codes (symbols), Chinese government, class diagrams, computer-aided instruction, business operation, computer programming, access control.

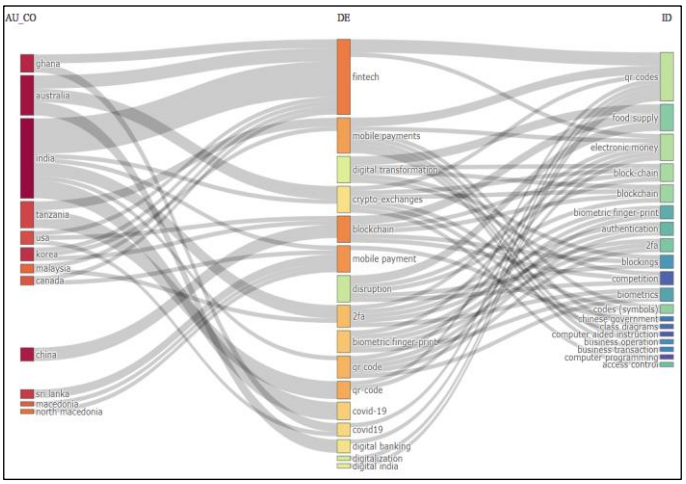

Figure 2: Three field plots.
Source: Authors, (2024).

IV.1.3 Most Relevant Sources

Figure 3 shows 10 sources or journals that have published research on Fintech QR Codes. It is said in Figure 1 that there are only 16 documents that have been published so Figure 3 Most Relevant Sources shows each journal there is only 1 article published about Fintech QR Code. It can be seen that the publication of articles about Fintech QR codes is published in conference journals, namely the 2021 9th International Conference on Reliability, the 2022 International Conference on Digital Transform, icacnis 2022-2022 International Conference on Ad, and proceedings- International Conference on communic. For journal publishing in 6 international journals, namely Internet fure, Global Social Welfare, International Journal on Recent and Innovation Tre, research anthology on small business strategies for, studies in systems decision and control, and technology in society.

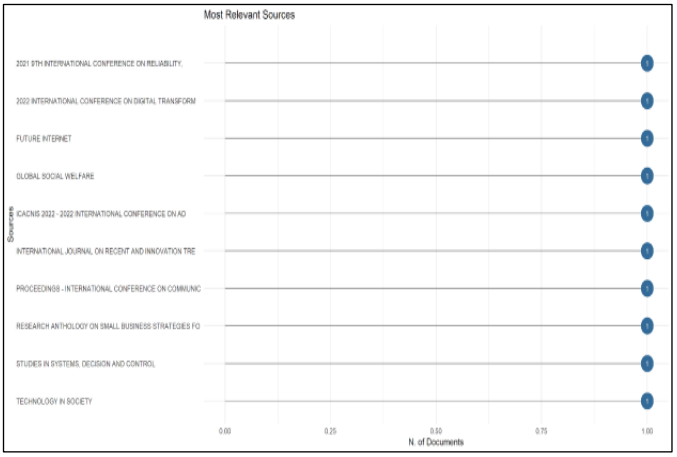

Figure 3: Most Relevant Sources.
Source: Authors, (2024).

IV.1.4 Countries' Scientific Production

Table 2 shows the countries that have published Fintech QR code articles. Seven countries have contributed to scientific publications about Fintech QR codes. Based on the acquisition of research data, India ranks first with the acquisition of 7 frequencies of scientific publication contributions related to the Fintech QR Code. Furthermore, followed by Australia and China have 3 frequencies, Ghana, South Korea, Sri Lanka, Tanzania, and the USA have 2 frequencies, while countries with low broadcast coverage include Canada, Malaysia, and North Macedonia each have 1 frequency. In Figure 4, the darker the color on the map, the higher the frequency of publishing articles from that country.

Table 2: Countries' Scientific Production.

Region	Freq
INDIA	7
AUSTRALIA	3
CHINA	3
GHANA	2
SOUTH KOREA	2
SRI LANKA	2
TANZANIA	2
USA	2
CANADA	1
MALAYSIA	1
NORTH MACEDONIA	1

Source: Authors, (2024).

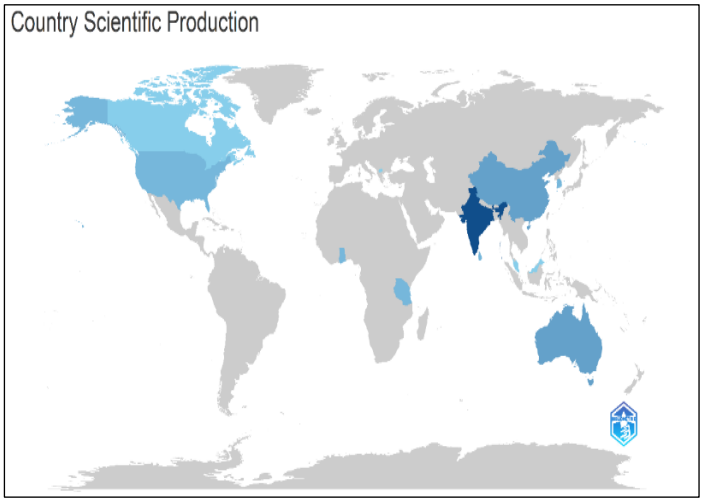

Figure 4: Countries' Scientific Production.
Source: Authors, (2024).

IV.1.5 Word Cloud and Tree Map

Figures 5 and 6 show the data visualization based on the most frequently used keywords on the keyword graph settings that the author has used before. The advantage of choosing these keywords is that they provide insight into the most important topics and research trends. Figure 5 is about the word cloud where it can be seen that the most visible keywords are food supply, block-chain, and QR codes. Figure 6 discusses keywords based on treemap illustrating the frequency of keyword users where the most frequently used words are QR codes 3 frequencies with a rate of 5%, Block-chain and food supply 2 frequencies with a rate of 4%.

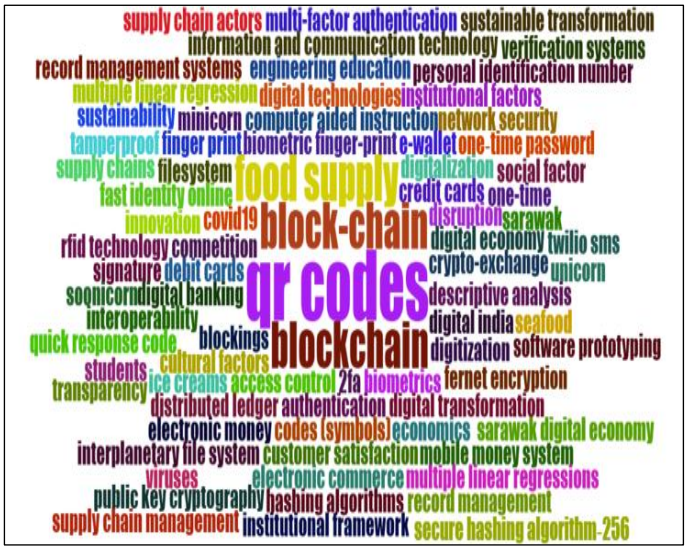

Figure 5: WordCloud.
Source: Authors, (2024).

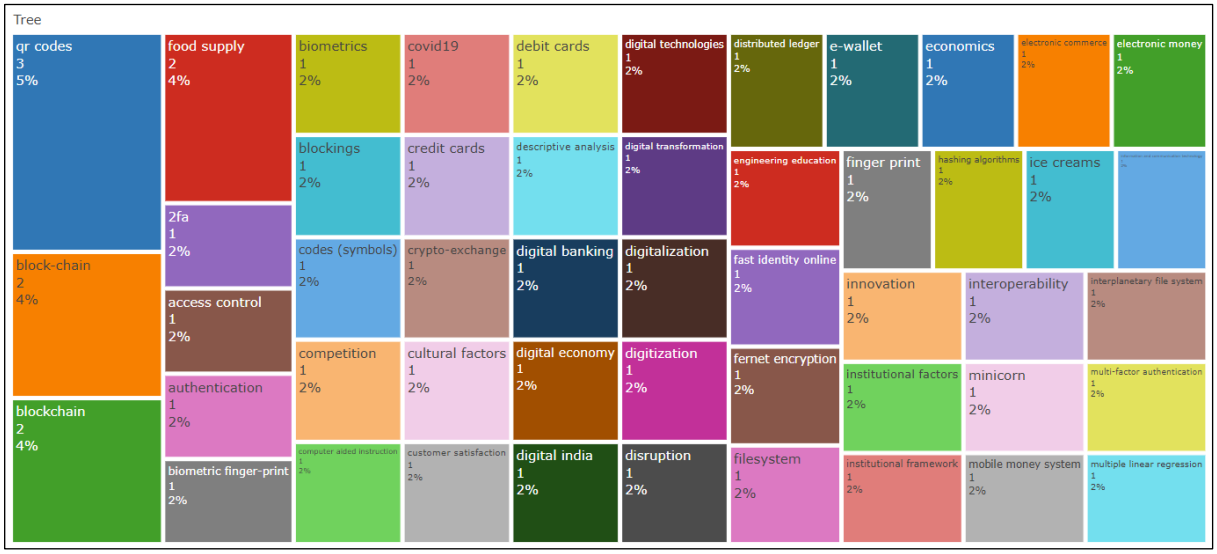

Figure 6: Tree Map.
Source: Authors, (2023).

IV.1.6 VOSviewer

From 16 documents obtained based on Scopus search data, Figure 7 can provide an overview of the Co-occurrence network which displays words in colored form by considering whether there is a link between one word and another. The same round color shows the weight of the relationship between words. the darker the color results in the image, the longer the research discusses the topic. For the size of the circle in Figure 7, it shows the number of publications related to the word both in article titles, abstracts, and keywords, the larger the circle, the more the number of articles related to the term. It can be said in Figure 13 that every word that is connected means that the word is influential and significant whether the research on the word is positive or negative. Based on Table 2, there are 5 clusters and some gaps that are far enough between colors to get the results of the number of words there are 75 words

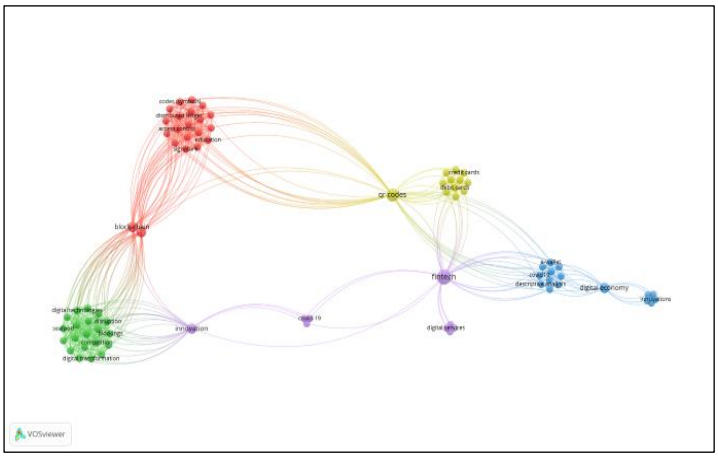

Figure 7: VOS viewers network visualization.
Source: Authors, (2024).

Table 3: Clusters from VOS viewers.

Clusters	Items	Type
1	20 Red	Access control, blockchain, codes (symbols), computer-aided instruction, crypto-exchange, distributed ledger, education, engineering education, filesystem, interoperability, interplanetary file system, ipfs, network security, record management, record management systems, signature, students, tamper-proof, transparency, verification systems.
2	20 Green	Blockings, competition, digital technologies, digital transformation, digitization, disruption, electronic commerce, food, food supply, information and communication technology, institutional factors, institutional framework, seafood, social factors, supply chain, supply chain actors, supply chain management, sustainability, sustainable transformation.
3	16 Blue	COVID-19, descriptive analysis, digital economy, e-wallet, innovations, modern, multiple linear regression, payment instruments, payment market, payment systems, RFID technology, Sarawak, Sarawak digital economy, tam, technology acceptance model, viruses.
4	11 Yellow	Credit cards, customer satisfaction, debit cards, digital banking, digital India, digitalization, economics, mini corn, QR codes, soonicorn, unicorn.
5	8 Purple	Covid-19, digital services, disruption technology, financial inclusion, financial literacy, financial policy, Fintech, innovation, QR-code.

Source: Authors, (2024).

IV.2 QUICK RESPONSE CODE INDONESIAN STANDARD (QRIS)

IV.2.1 Main information

Figure 8 provides an overview of the Quick Response Code Indonesian Standard (QRIS) data sources used in bibliometric analysis. It is confirmed that 7 articles from 24 authors conducted research related to the Quick Response Code Indonesian Standard (QRIS). Based on Figure 8 and Table 4, there are 7 research articles published from 2021 to 2023. In Table 1, the data from the annual Scientific Production results of the development of the production of themed articles on the Quick Response Code Indonesian Standard (QRIS) is still small, namely only 7 documents. Research on the Quick Response Code Indonesian Standard (QRIS) was first discussed in 2021, so it can be said that there is still little research on the Quick Response Code Indonesian Standard (QRIS) In 2021, 2 articles were published, in 2022 4 articles were published, and in 2023 1 article was published.

Figure 8: Main information.
Source: Authors, (2023).

Table 4: Annual Scientific Production.

Year	Articles
2021	2
2022	4
2023	1

Source: Authors, (2024).

IV.2.2 Three-Field Plot

Figure 9 three-pole graph characterizes the allocation by country (AU_CO) on the left, Keyword (DE) in the middle, and Additional Keyword (ID) on the right. the three-pole graph was created to reflect the percentage of topics raised by previous researchers for each country related to the Quick Response Code Indonesian Standard (QRIS). It can be seen that AU_CO has 2 countries that research Quick Response Code Indonesian Standard (QRIS), namely Indonesia and the United Kingdom. The most research on the Quick Response Code Indonesian Standard (QRIS) is in Indonesia because QRIS is a Fintech QR code used by the country of Indonesia itself so it is said that Indonesia has several researchers who examine the development of the Quick Response Code Indonesian Standard (QRIS) itself. It can be seen that the DE and ID keywords that are often used for the development of this research are QRIS, e-wallet, technology acceptance model, perceived ease of use, intention to use, perceived usefulness, digital wallet, attitudes towards technology, in-store payment, m-payment, mobile technology acceptance model, trust, quick response code, Indonesia, medium enterprise merchant, quick response code Indonesian standard, electronic money, attitude towards technology, case studies, marketing sectors, micro, in-store payment, e-wallet, ease of use, codes (symbols), and global system for mobile communications.

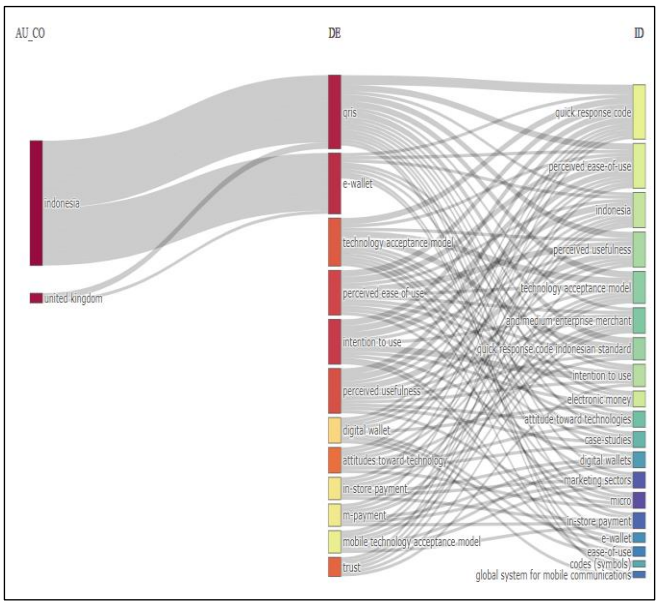

Figure 9: Three field plots.
Source: Authors, (2024).

IV.2.3 Most Relevant Sources

Figure 10 shows 7 sources or journals that have published research on the Quick Response Code Indonesian Standard (QRIS). It is said in Figure 8 that there are only 7 documents that have been published so that in Figure 10 Most Relevant Sources shows that each journal has only 1 article published about the Quick Response Code Indonesian Standard (QRIS). It can be seen that the publication of articles about the Quick Response Code Indonesian Standard (QRIS) is contained in 7 journals, namely the 2022 5th International Conference on Computers and, AIP conference proceedings, the International Journal of Economics and Management, Journal of Distribution Science, proceedings of 2021 6th international conference o, proceedings of 2021 international conference on in, proceedings of 2022 international conference on in.

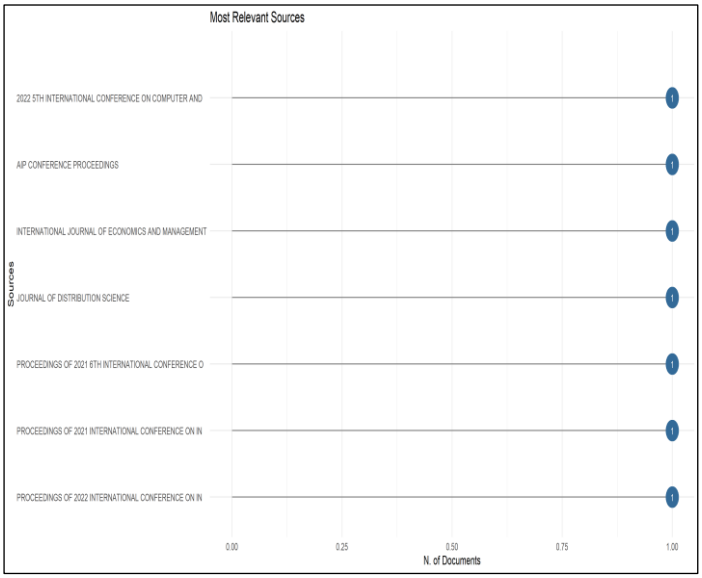

Figure 10: Most Relevant Sources.
Source: Authors, (2024).

IV.2.4 WordCloud and TreeMap

Figures 11 and 12 show the data visualization based on the most frequently used keywords on the keyword graph settings that the author has used before. The advantage of choosing these keywords is that they provide insight into the most important topics and research trends. Figure 11 is about the word cloud where it can be seen that the most visible keywords are quick response code Indonesia standard, intention to use, perceived ease of use, quick response code, electronic money, Indonesia, perceived usefulness, and technology acceptance model. Figure 12 discussing keywords based on treemap illustrates the frequency of keyword users where the most frequently used words are quick response codes 4 frequencies with a level of 8%, perceived ease of use 3 frequencies with a level of 6%. At frequency level 2 there are six words, namely electronic money, Indonesian intention to use, perceived usefulness, quick response code Indonesian standard, and technology acceptance model.

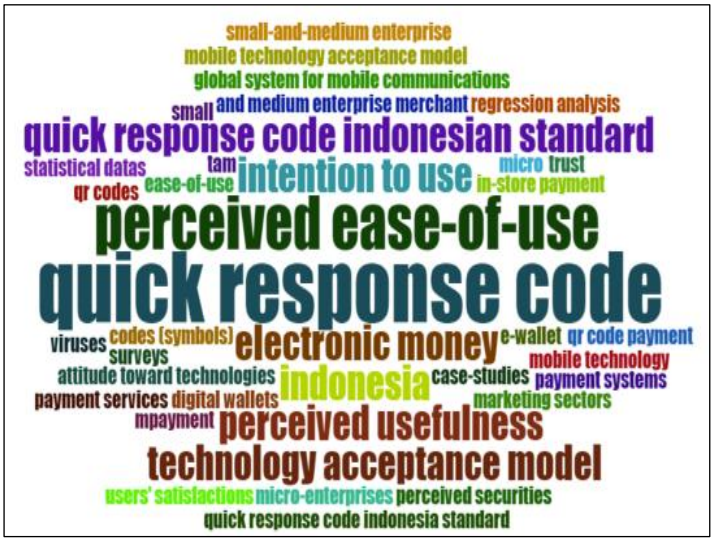

Figure 11: Word Cloud.
Source: Authors, (2024).

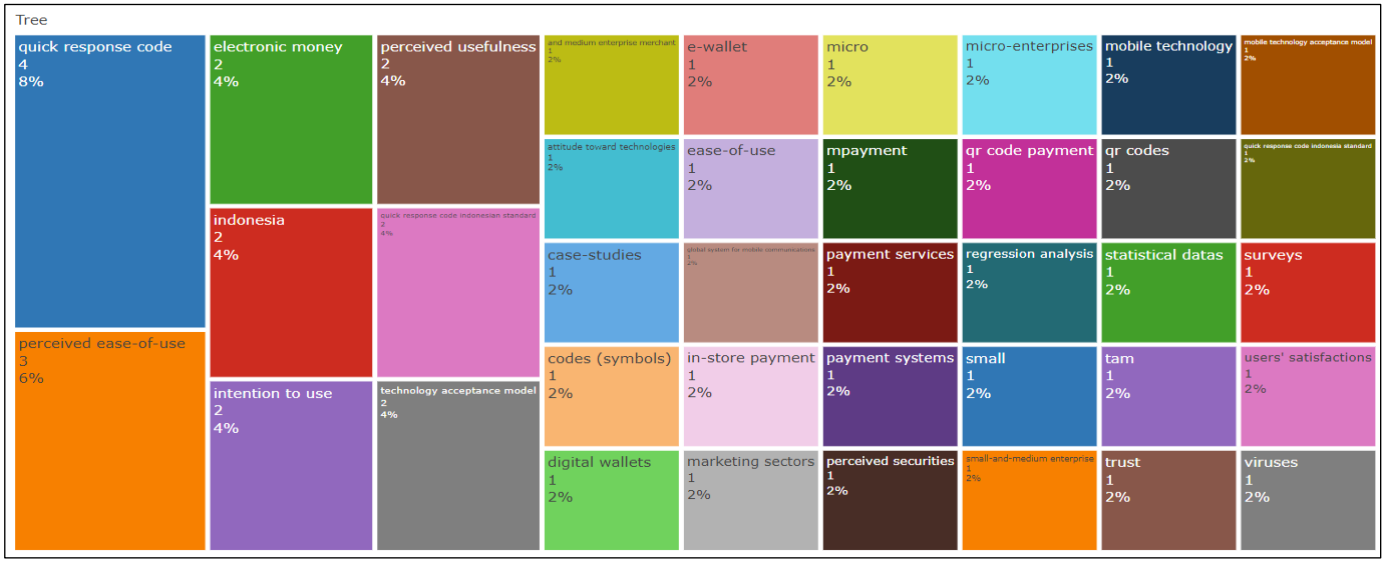

Figure 12: Tree Map.
Source: Authors, (2024).

IV.2.5 VOS viewer

From 7 documents obtained based on Scopus search data, Figure 13 can provide an overview of the Co-occurrence network which displays words in colored form by considering whether there is a link between one word and another. The same round color shows the weight of the relationship between words. the darker the color results in the image, the longer the research discusses the topic. The size of the circle in Figure 13 shows the number of publications related to the word both in article titles, abstracts, and keywords the bigger the circle the more the number of articles there are related to the term. It can be said in Figure 13 that every word that is connected means that the word is influential and significant whether the research on the word is positive or negative. Based on Table 5, there are 5 clusters and some gaps that are far enough between colors to get the results of the number of words there are 48 words.

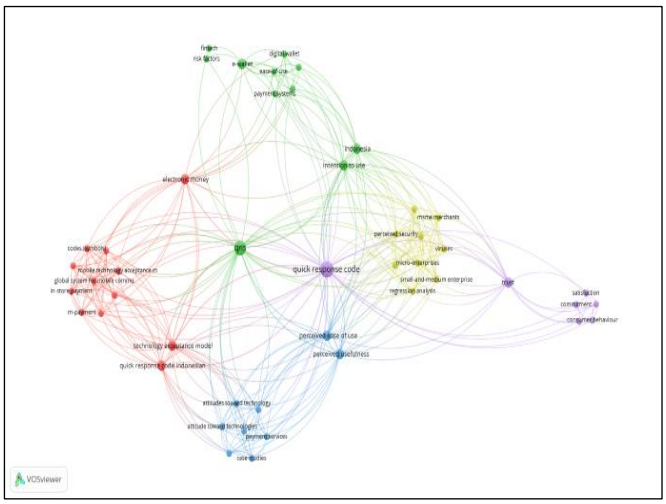

Figure 13: VOS viewers network visualization.
Source: Authors, (2024).

Table 5: Clusters from VOSviewers.

Clusters	Items	Type
1	12 Red	codes (symbols), electronic money, global system for mobile communications, in-store payment, m-payment, mobile technology, mobile technology acceptance model, mpayment, QR code payment, QR codes, quick response code Indonesian standard, technology acceptance model.
2	11 Green	Digital wallet, e-wallet, ease of use, Fintech, Indonesia, intention to use, payment systems, QRIS, risk factors, tam, user satisfaction.
3	9 Blue	Attitude toward technologies, attitude toward technology, case studies, marketing sectors, payment services, perceived ease of use, perceived usefulness, statistical data, and surveys.
4	9 Yellow	Micro small and medium enterprise merchants, micro entrechats, MSME merchants, perceived securities, perceived security, quick response code Indonesia standard, regression analysis, small and medium enterprise, viruses.
5	7 Purple	Commitment, consumer behavior, customer loyalty, digital transaction, quick response code, satisfaction, trust.

Source: Authors, (2024).

V. CONCLUSIONS

QR Code: The results of the analysis on Fintech QR Code research the development of Fintech QR code-themed article production is still small, namely only 16 documents from 2019-2023. Three-Field Plot and Countries' Scientific Production see that the dominating country is India. The results of the most dominating keywords based on the Three-Field Plot are Fintech and QR codes. There are different results on Word Cloud and Tree Map which are food supply, block-chain, and QR codes the dominating keywords. Most Relevant Sources The top 10 journals each only published 1 article topic. Vosviewer analysis there are 5 clusters and some gaps are far enough between colors to get the result of the number of words there are 75 words.

QRIS: The results of the QRIS research analysis of the development of QRIS-themed articles are only 7 documents published from 2021 to 2023. Based on the results of the Three-Field Plot and Countries' Scientific Production, it can be seen that the dominant country is Indonesia because this QR Code is used by the Indonesian people. For the results, the most dominating keywords based on the Three-Field Plot are QRIS, e-wallet, and quick response code. There are different results on Word Cloud and TreeMap which are quick response codes and perceived ease of use. Most Relevant Sources The top 7 journals each only published 1 article topic. Vosviewer analysis there are 5 clusters and some gaps that are far enough between colors to get the results of the number of words there are 48 words.

The conclusion of this research shows that the perception and issue of Fintech (QR Code and QRIS) has changed in each period. The discussion of these 2 themes is still minimally researched. Because this research is still minimal, it is a good topic for further research to develop topics related to this research.

VI. AUTHOR'S CONTRIBUTION

Conceptualization: Anisyah Vella.
Methodology: Anisyah Vella.
Investigation: Anisyah Vella.
Discussion of results: Anisyah Vella, Wihandaru Sotya Pamungkas, and Arni Surwanti.
Writing – Original Draft: Anisyah Vella.
Writing – Review and Editing: Anisyah Vella.
Resources: Anisyah Vella.
Supervision: Wihandaru Sotya Pamungkas, and Arni Surwanti.
Approval of the final text: Anisyah Vella, Wihandaru Sotya Pamungkas, and Arni Surwanti.

VII. REFERENCES

[1] J. R. Bhat, S. A. AlQahtani, and M. Nekovee, "FinTech enablers, use cases, and role of future internet of things," *J. King Saud Univ. - Comput. Inf. Sci.*, vol. 35, no. 1, pp. 87–101, 2023, doi: 10.1016/j.jksuci.2022.08.033.

[2] K. B. Ooi and G. W. H. Tan, "Mobile technology acceptance model: An investigation using mobile users to explore smartphone credit card," *Expert Syst. Appl.*, vol. 59, pp. 33–46, 2016, doi: 10.1016/j.eswa.2016.04.015.

[3] K. Mahmud, M. M. A. Joarder, and K. Sakib, "Customer Fintech Readiness (CFR): Assessing customer readiness for fintech in Bangladesh," *J. Open Innov. Technol. Mark. Complex.*, vol. 9, no. 2, p. 100032, 2023, doi: 10.1016/j.joitmc.2023.100032.

[4] V. Murinde, E. Rizopoulos, and M. Zachariadis, "The impact of the FinTech revolution on the future of banking: Opportunities and risks," *Int. Rev. Financ. Anal.*, vol. 81, no. June 2021, 2022, doi: 10.1016/j.irfa.2022.102103.

[5] K. P. Y. Lai and P. Langley, "Playful finance: Gamification and intermediation in FinTech economies," *Geoforum*, no. November 2022, p. 103848, 2023, doi: 10.1016/j.geoforum.2023.103848.

[6] S. Bojjagani *et al.*, "The Use of IoT-based Wearable Devices to Ensure Secure Lightweight Pay- ments in FinTech Applications," *J. King Saud Univ. - Comput. Inf. Sci.*, 2023, doi: https://doi.org/10.1016/j.jksuci.2023.101785.

[7] M. Jocevski, A. Ghezzi, and N. Arvidsson, "Exploring the growth challenge of mobile payment platforms: A business model perspective," *Electron. Commer. Res. Appl.*, vol. 40, no. December 2019, p. 100908, 2020, doi: 10.1016/j.elerap.2019.100908.

[8] M. Barroso and J. Laborda, "Digital transformation and the emergence of the Fintech sector: Systematic literature review," *Digit. Bus.*, vol. 2, no. 2, p. 100028, 2022, doi: 10.1016/j.digbus.2022.100028.

[9] G. Ali, M. A. Dida, and A. E. Sam, "A secure and efficient multi-factor authentication algorithm for mobile money applications," *Futur. Internet*, vol. 13, no. 12, pp. 1–31, 2021, doi: 10.3390/fi13120299.

[10] B. Hashan, Y. Abeyrathna, M. Kaluaratchi, A. Piyalath, and S. Thelijjagoda, "VoiceNote: An Intelligent tool for monetary transactions with integrated voice support," *Proc. - IEEE Int. Res. Conf. Smart Comput. Syst. Eng. SCSE 2019*, pp. 119–125, 2019, doi: 10.23919/SCSE.2019.8842768.

[11] E. Abad-Segura, M. D. González-Zamar, E. López-Meneses, and E. Vázquez-Cano, "Financial Technology: Review of trends, approaches, and management," *Mathematics*, vol. 8, no. 6, pp. 1–36, 2020, doi: 10.3390/math8060951.

[12] J. Mookerjee, S. Chattopadhyay, T. Ahmed, and L. Addepalli, "Impact of QR-Codes as a Disruptive Technology during the Covid-19 Contagion," *Int. J. Recent Innov. Trends Comput. Commun.*, vol. 10, no. 1, pp. 284–289, 2022, doi: 10.17762/ijritcc.v10i1s.5850.

[13] P. Escobedo *et al.*, "QRsens: Dual-purpose quick response code with built-in colorimetric sensors," *Sensors Actuators B Chem.*, vol. 376, no. November 2022, 2023, doi: 10.1016/j.snb.2022.133001.

[14] H. Haxhimehmeti and A. Besimi, "Prototyping Micropayment Mobile Platfom

using QR Codes," *2020 9th Mediterr. Conf. Embed. Comput. MECO 2020*, pp. 8–11, 2020, doi: 10.1109/MECO49872.2020.9134150.

[15] W. Badrawani, "Measuring Central Bank's Policy Effectiveness in Affecting Intention to Use New Payment Platform During The COVID-19 Pandemic," *Int. J. Econ. Manag.*, vol. 16, no. 3, pp. 319–337, 2022, doi: 10.47836/ijeam.16.3.04.

[16] N. Nurhadi, M. Suhaidi, and L. Latip, "Implementasi Quick Response Code Indonesian Standard (Qris) Dalam Pembayaran Uji Kir Kendaraan Di Dinas Perhubungan Kota Dumai," *Sebatik*, vol. 26, no. 2, pp. 557–564, 2022, doi: 10.46984/sebatik.v26i2.2007.

[17] E. Pravitasari and A. Fauziyah, "The Influence of Lifestyle, Perceived Convenience, And Promotion on The Decision to Use Quick Response Code Indonesian Standard (QRIS)," *Return Study Manag. Econ. Bussines*, vol. 2, no. 8, pp. 784–794, 2023, doi: 10.57096/return.v2i8.131.

[18] D. Wiryawan, J. Suhartono, S. E. Hiererra, S. D. A. Ambarwati, and A. Gui, "Factors influencing e-wallet users' perception on payment transaction security: Evaluation on quick response Indonesia standard," *AIP Conf. Proc.*, vol. 2508, no. March, 2023, doi: 10.1063/5.0114922.