

Quick Response Codes' Benefits for MSMEs: A Visualised Bibliometric Approach

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Abstract: - This study intends to discover the analysis of quality websites to consumer trust and loyalty since online transaction activities are quickly increasing. The number of online clients in Indonesia grows year after year, as does the number of online shops selling different internet-based media. Opportunities for online stores are expanding, but competition is also rising. For customers to be trusted and loyal, online business owners must understand and meet their customers' desires. The study employed quantitative research methodologies, and the sample size was 100 respondents, who were analyzed using path analysis and the third edition of the SmartPLS program. Data acquired will be picked first, and unnecessary data will be removed, before being filtered and processed through data gathering; this stage is required. The analysis findings are extremely maximum in deciding the final result, and the study results indicated that all factors have a positive and substantial influence on the result, which is very nice and acceptable.

Key-Words: - QRIS; Bibliometric analysis; quick response code; digital finance

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1 Introduction

The COVID-19 pandemic has had a significant impact on enterprises worldwide, particularly Micro, Small, and Medium Enterprises (MSMEs). MSMEs confront substantial hurdles in continuing operations during and after the epidemic in Indonesia, where they play a vital role in the economy, [1]. So far, we know that the issues include restricted financial resources, decreased client demand, and disrupted supply chains, which have presented a substantial danger to their long-term survival, [2].

To answer this challenge, the Indonesian government introduced the Quick Response Code Indonesian Standard (QRIS) as a digital payment solution. The Indonesian government launched the digital payment system QRIS (Quick Response Code Indonesian Standard), [3]. Using QR (Quick Response) codes that are integrated with several payment platforms, such as e-wallets, mobile banking, or banking applications, QRIS enables customers to make non-cash payments, [4]. The fact that QRIS can accept payments through numerous platforms, including e-wallets like GoPay, OVO, and DANA as well as banking services like BCA, Mandiri, and others, is an illustration of its features and functionality. This makes it easier for consumers who use different payment platforms, [5].

Since its launch, MSMEs in Indonesia across a range of industries have adopted QRIS more frequently. QRIS has become a recognized payment mechanism across several industry sectors, including retail, food and beverage, services, and others, [6]. The Indonesian government has educated and trained MSMEs on the usage of QRIS in conjunction with several industry partners. The adoption of QRIS has been boosted by the benefits and assistance it provides to MSMEs, [7]. MSMEs can increase the speed and security of payment transactions by utilizing QRIS. Additionally, QRIS assists MSMEs in growing their market share, boosting sales, and lowering operating expenses, [8].

MSMEs can profit greatly from QRIS (Quick Response Code Indonesian Standard) by using it to continue operating their businesses after an epidemic, [9]. One advantage of QRIS for MSMEs is that it enables them to accept a range of digital payments, such as e-wallets and banking services, [10]. MSMEs can boost the accessibility and simplicity of transactions, hence growing the potential customer base, by offering several payment options to clients, [11]. With the aforementioned advantages, QRIS offers MSMEs a crucial answer for sustaining their business after the pandemic, [12]. MSMEs can boost productivity,

strengthen transaction security, and reach more customers by implementing QRIS, enabling them to thrive in a new era marked by shifting consumer and payment trends, [13].

2 Literature Review

MSMEs are small to medium-sized businesses with fewer employees and lower capitalization, [14]. MSMEs are essential to a nation's economy because they create a large number of jobs, spur regional economic development, and advance social development, [15].

MSMEs can include a wide range of companies, including small retail stores, restaurants, food carts, repair shops, repair services, handicraft production, and so on. MSMEs vary by country and industry sector, [16]. MSMEs can also include businesses in agriculture, fishing, and tourism. MSMEs usually face a range of challenges, such as limited access to capital, human resources, market access, and technology, [17]. MSMEs, on the other hand, offer advantages such as market flexibility, particular knowledge of certain goods or services, and contributions to local community economic empowerment, [18].

Code of Rapid Response the Indonesian Standard, abbreviated as QRIS, is a combination of multiple forms of QR from various payment system service providers (PJSP) and a QR Code, [19]. Every establishment or place of business that uses QRIS will have a QR code that customers may scan with a digital payment application, [20]. Payments will be handled automatically and monies sent from the consumer's account to the merchant's account by scanning this QR code, [21].

QRIS offers several advantages and benefits to both consumers and merchants, [22]. QRIS enables users to make payments without having to carry cash or a physical card. Consumers may conduct transactions fast and conveniently by using a digital payment application linked to QRIS, [23]. QRIS increases the effectiveness of the payment process for merchants, reduces the danger of cash theft or loss, and makes financial reporting and reconciliation easier, [24]. Additionally, QRIS makes it possible for merchants to accept multiple types of digital payments using a single QR code, improving customer payment accessibility, [25].

The technological acceptance model (TAM) and theory of planned behavior (TPB) are combined in this study to more thoroughly examine the variables influencing MSMEs' intention to utilize QRIS, [26]. A theoretical framework known as the Technology Acceptance Model (TAM) describes and forecasts

people's acceptance and adoption of new technology, [27]. It was created by Fred Davis in the 1980s, and since then, a variety of industries, including information systems and consumer behavior research, have extensively employed it. The TAM contends that the main factor influencing people's intentions to accept and use technology is its perceived usefulness and simplicity of use, [28].

Although Icek Ajzen created the Theory of Planned Behavior (TPB) as a psychological concept in the late 1980s, [29]. It offers a framework for comprehending and forecasting human behavior, especially about the process of making decisions and forming intentions, [30].

The term "bibliometric technique" refers to the use of quantitative tools with bibliographic data, [31]. Various quantitative methodologies and approaches are referred to as "bibliometrics techniques" when analyzing and measuring scientific publications and research activities. These methods entail the systematic examination of bibliographic information, including citation counts, publication totals, and authorship patterns, to learn more about the traits, implications, and trends in a certain field of study. Massive amounts of bibliographic data can now be managed by researchers without bias. These bibliometrics techniques are widely used in academic research, institutional evaluations, funding allocation, and assessing the impact of scientific output. They provide quantitative insights into research performance, collaboration patterns, knowledge diffusion, and the overall landscape of scholarly communication.

3 Methodology

This study examines the QRIS for MSMEs published between 2017 and 2023. Data shows that QRIS research for MSMEs fluctuated but reached its highest number in 2022. However, in 2023 the number of publications on the honeycomb model decreased. But do not rule out that research in 2023 will increase because, by the time this journal was completed, the research data that had been published had reached 32 studies (Table 1).

Table 1. Number Of Paper (2017-2023)

2017	0
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2018	0
2019	0
2020	3
2021	21
2022	45
2023	32
Total	104

The analysis aims to identify articles that have the most significant impact in the area of QRIS for MSMEs. Table 2 displays the top 3 authors by paper title.

Table 2. Top Authors

Author	Numbers of Paper	Paper Title
IWA Setiawan, LP Mahyuni	3	Qris in the Eyes of Umkm: Exploration of Umkm's Perception and Intention Using Qris
		How does QRIS attract MSMEs? a model to understand MSME's intention to use QRIS
S. Aisyah	2	Implementation of Financial Technology in Qris as a Digital Payment System in the MSME Sector in Binjai City
		Assistance in using QRIS for MSMEs to increase MSMEs in the city of Medan
A. Pracoyo	2	QRIS socialization to increase MSMEs
		Socialization of QRIS to Increase the Productivity of MSMEs in DKI Jakarta Province

Table 2 shows that there was one specific author who published the most articles (4 publications) in the 2019-2023 period, while the rest published 2-3 articles. Most of the citations are dominated by papers released in 2020, as seen in Table 3 of the top rankings of reference article titles since publication to the preparation of this paper.

Table 3. Top Citations

Citation	First Author	Titles	Year	Journal
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73	IWA Setiawan, LP Mahyuni	QRIS in the eyes of MSMEs: an exploration of MSME perceptions and intentions to use QRIS	2020	E-Journal Ekon. and Business Univ. Udayana
17	RA Nasution	Analysis of Traders' Perceptions on the Use of Qris as a Tool for MSME Transactions in Medan City	2020	Physical review letters
15	MG Pangestu	Behavior Intention Based on Model Unified Theory of Acceptance and Use of Technology (UTAUT) (Studies on SMEs in the Food & Beverage Industry Sector in Jambi)	2022	ejournal.unama.ac.id

The most quoted rankings are shown in the table above. Article 2020 by IWA Setiawan, LP Mahyuni is currently (in 2023) in the top position with 73 citations published by the E-Journal of Economics and Business at Udayana University. This article is also the most recent publication among the articles on the list.

4 Result and Discussion

This graphical visual mapping of published studies with the QRIS theme will further investigate the findings of the meta-analysis. this is based on the findings of the keyword mapping study which will be detected in several articles that are mapped.

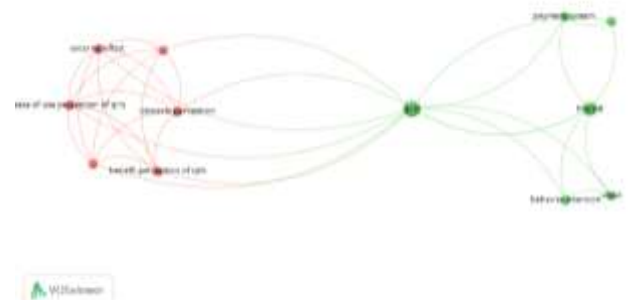


Fig. 1. Network analysis

Bibliometric-related techniques to represent scientific fields are called science mapping. This

representation is made by creating a landscape map that can incorporate scientific principles. The results of network visualization on keywords are shown in Figure 1 above. The linkages between themes in terms of article names and keywords are not the complete substance of the article, as shown in Figure 1.

Figure 1 shows several terms that have frequently appeared about QRIS over the last 3 to 4 years which are displayed along with their relationship to other keywords in the two clusters, namely:

- Cluster 1 (6 Items, red color): benefit perception of qris, ease of use perception of qris, external effect, intention of using qris, obstacle perception, understanding about qris.
- Cluster 2 (6 Items, Green Color): behavior intention, msme, payment system, perception, qris, utaut

From the list of items in each cluster, the core theme of Cluster 1 which is represented in red includes practical aspects such as obstacles, external effects, and benefits. The green cluster, Cluster 2, investigates the theoretical realm with terms such as UTAUT and Behavior intention. The figure serves as a visual representation of the multidimensional nature of QRIS, illustrating its significance in the various fields and fields of research it has inspired. In addition to network analysis, we also provide overlay analysis. The overlay visualization will show traces of research history. Figure 2 shows that most research on QRIS has been carried out before 2022.

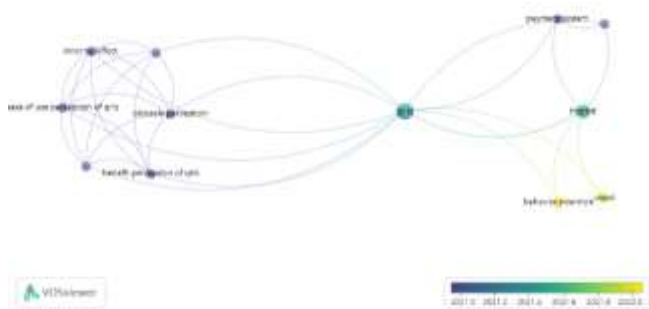


Fig. 2. Overlay analysis

Finally, we present a density visualization. The density analysis referred to here is that it is possible to identify research areas that are still relatively unexplored. In this visualization, the color spectrum ranges from yellow to blue. A more intense yellow color indicates a higher density and emphasis on the

topic being discussed. On the other hand, when the color gets bluer, it indicates a lower density and less focus on the topic.

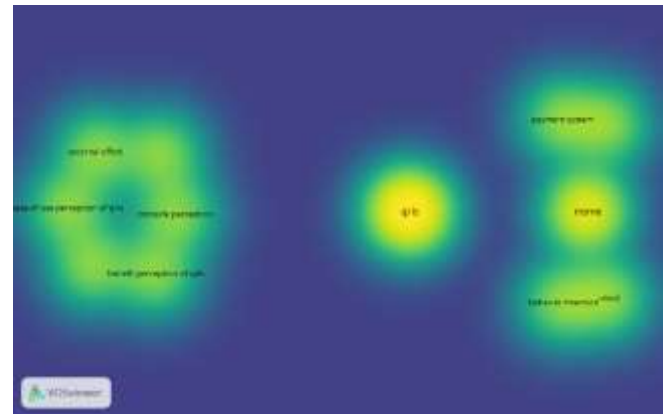


Fig. 3. Item density

5 Conclusion

QRIS is a digital payment solution for MSMEs in Indonesia to maintain and rebuild their businesses after the pandemic. By examining the benefits of QRIS in terms of customer convenience, financial management, and market expansion, this analysis underscores its potential to support MSMEs in adapting to the new normal and driving economic recovery. Through bibliometric data analysis, the grouping of keywords in the image shows the nature of research topics related to QRIS, including practical and theoretical aspects. Overlay analysis and density visualization further reveal the history of research and the emphasis placed on different research areas. Overall, policymakers, stakeholders, and MSMEs can take advantage of these findings to further promote the adoption and utilization of QRIS, ensuring the long-term sustainability and growth of MSMEs in Indonesia, [32].

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Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

- Faiz Amrullah Ibnu Purwanto and Budi Rustandi Kartawinata carried out the field survey, data analysis, and optimization.
- Mahir Pradana was responsible for the conceptualization and review.
- Aldi Akbar was responsible for the field survey.

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Conflict of Interest

The authors have no conflict of interest to declare.

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