



PERSONAL DATA PROTECTION IN INDONESIA’S PEER-TO-PEER LENDING; A BIBLIOMETRIC ANALYSIS

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ABSTRACT

The rise of Peer-to-Peer (P2P) Lending in the financial ecosystem has introduced a digital credit disbursement mechanism characterized by simplicity and a fast process. However, P2P Lending has faced criticism, frequently accused of misusing customer data, particularly privacy violations during loan collection processes. Due to the ongoing issues with personal data protection in Indonesia’s P2P Lending industry, further studies on this topic are necessary. Moreover, previous studies have shown that no bibliometric analysis of personal data protection in P2P Lending in Indonesia has been conducted, which prompted us to address this gap.

In conducting the bibliometric analysis, we reviewed articles published between 2018 and 2023 on Google Scholar. For the selection of articles, we used the Publish or Perish application, resulting in a final sample of 99 articles. This study concluded that the keyword "protection" is frequently associated with information, problem, benefit, trust, implementation, user, platform, and information security. Another finding shows that the subject of this study has increased since 2020 and remains highly relevant for further study. Furthermore, the subject of this study includes keywords that are rarely discussed, such as MSMEs (Micro, Small, and Medium Enterprises) and inclusion, indicating that future study could explore these two topics further.

INTRODUCTION

Internet usage in Indonesia has seen substantial growth in recent years, reaching a peak of 221 million users in 2024 (Indonesia Internet Service Provider Association, 2024; Anggaredho, 2024). The widespread use of the internet has triggered the emergence of new players in the financial sector, Peer-to-Peer (P2P) Lending, which is the antithesis of traditional financial institutions and operates in a digital format (Ritika & Khanna, 2024; Teichmann et al., 2024). P2P Lending, originally adopted from the United Kingdom and having gained global traction following the 2008 financial crisis, refers to a financial service that facilitates transactions between borrowers and investors through an online platform (Gonzalez, 2023; Hidajat, 2020; Teichmann et al., 2024). In contrast to traditional financial institutions that involve complex and intricate procedures in credit disbursement, P2P Lending offers the public an alternative by providing credit in an easier and faster process (Rehman et al., 2024; Rosdini et al., 2024). The alternative service has contributed to the rapid acceptance of P2P Lending by the public in Indonesia, as evidenced by the high outstanding disbursement of P2P Lending credit. According to data from the Financial Services Authority of the Republic of Indonesia (FSA RI), the

outstanding amount reached IDR 66.78 trillion in the first semester of 2024. Furthermore, the digital P2P Lending operating method makes it more possible to access remote communities far from the city, unable to be reached by the physical offices of traditional financial institutions (Cumming et al., 2023; Hidajat, 2020).

On the other hand, P2P Lending operations that use digital technology also have side effects, such as serving as a venue for money laundering related to corruption, bribery, and terrorism activities, as well as the misuse of customer personal data (Anggaredho, 2024a; Teichmann et al., 2024). The personal data, which is the subject of this study, can be defined as a collection of information that identifies an individual (Da Veiga et al., 2020; Sudarwanto & Kharisma, 2022). Personal data is inherently private and recognized as a fundamental human right that must be respected by all parties (Al-Abdullah et al., 2020; Sudarwanto & Kharisma, 2022). This fundamental nature also means that personal information can only be shared with others based on the individual's approval (Sudarwanto & Kharisma, 2022; Watson & Lupton, 2021). Unfortunately, P2P Lending, which is supposed to protect personal data, is frequently accused of data misuse, including fraud (such as using customer ID cards to apply for credit in other applications), and more common privacy violations, such as debt collection practices that embarrass customers by disclosing their personal information to unrelated parties, including neighbors, relatives, friends, colleagues, and even supervisors at work (Anggaredho, 2024a; Arvante, 2022; Sudarwanto & Kharisma, 2022).

Unethical debt collection practices by P2P Lending are the most frequently reported complaints in 2023 (the Financial Service Authority of Republic of Indonesia, 2024). This unethical behavior may stem from the significant risk burden carried by P2P Lending platforms, due to the lack of adequate collateral for the credit provided, which compels P2P Lending to misuse the social information disclosed by customers during the credit application process (Anggaredho, 2024a; Hao & Zhao, 2023; Li et al., 2018). Furthermore, the occurrence of unethical debt collection may be attributed to weak regulatory oversight of P2P Lending platforms (Gonzalez, 2023; Hidajat, 2020). In fact, from the perspective of legal governance in Indonesia, sanctions for those who misuse personal data are clearly stipulated in the Law of The Republic of Indonesia Number 27 of 2022 on Personal Data Protection and the Regulation of the Financial Services Authority of the Republic of Indonesia Number 1/POJK.07/2013 on Consumer Protection in the Financial Services Sector. However, the implementation of these regulations appears to be less than optimal.

Meanwhile, concerning the issue of personal data protection in P2P Lending in Indonesia, there have been several studies conducted (Anugerah & Indriani, 2018). However, based on our observations, no previous studies have conducted a bibliometric analysis on this topic. We argue that a study examining personal data protection in P2P Lending in Indonesia using bibliometric analysis remains highly relevant, as it can aid in the design of future study for scholars interested in exploring this topic.

METHODOLOGY

This study uses a qualitative method with a bibliometric analysis approach. Bibliometric analysis is fundamentally part of a literature review methodology aimed at mapping prior literature (Anggaredho, 2024b; Tranfield et al., 2003). The mapping generated through this approach provides a visual representation of the network between keywords, facilitating a clearer understanding for scholars of the most widely studied keywords and those relevant to the subject of the study (Haniyah & Soebagyo, 2021; Lestary et al., 2023). In conducting the analysis, we followed the steps outlined by previous literatures (Anggaredho, 2024b; Fahimnia et al., 2015).

1. *Determination of article database.* We used the Google Scholar database to collect articles for observation. This selection was based on the fact that Google Scholar applies consistent standards in document selection and is widely used by scholars conducting bibliometric analysis (Alam et al., 2021; Nurfauzan & Faizatunnisa, 2021). Additionally, we used the Publish or Perish (PoP) application to select and obtain statistical information on articles retrieved through Google Scholar.
2. *Determining keywords.* After selecting the article database, we identified the keywords to be input into the PoP application, such as "personal data protection, Indonesia's peer-to-peer lending" We also limited the literature reviewed to articles published between 2018 and 2023, with a maximum of 100 articles.
3. *Screening and data compilation.* From the 100 articles selected, we removed one article due to duplication with another, resulting in a final sample of 99 articles. The data from the final sample was saved in RIS format for further processing using the VosViewer application.
4. *Processing and analysis of results.* In the processing stage, we used the VosViewer application, which has also been widely used by previous scholars (Muhammad et al., 2023; Rahman et al., 2023). The application generates three types of output: (1) network visualization, which illustrates the relationship between keywords, (2) visual overlay, which depicts study trends, and (3) density visualization, which identifies keywords that have been less frequently studied (Sianipar et al., 2023).

RESULT AND DISCUSSION

As previously explained, the final sample we obtained consisted of 99 articles (see Table 1). Among the 99 articles observed, the screening results revealed that the total number of citations during the 2018-2023 period was 6.730, averaging 1.121 citations per year. Furthermore, when considering the number of citations per article, we found that each article had been cited an average of 67 times over the 2018-2023 period, or approximately 6 times per year.

Table 1. Screening Results Using the PoP Application

No	Points	Explanations
1.	Observation years	2018-2023
2.	Keywords	Personal data protection, Indonesia's Peer to Peer Lending
3.	Data Source	Google Scholar
4.	Number of sample (limitations)	100 articles
5.	Final sample	99 articles (1 duplicate article excluded)
6.	Citation frequency	6.730 x
7.	Annual citations	1.121 x
8.	Citation frequency per paper	67 x
9.	Annual citations per paper	6 x

Source: Authors (2024)

Then, the final sample data was saved in RIS format for further processing using the VosViewer application. We found the relationship between keywords, which were grouped into 9 clusters, including: (1) Cluster 1, consisting of 14 keywords, which include: bank, bank indonesia, borrowing, context, digital finance, effect, fintech peer, fintech sector, investment, legal aspect, overview, peer lending, phenomenon, smes. (2) Cluster 2, consisting of 11 keywords, which include: access control, benefit, blockchain, blockchain technology, implementation, problem, protection, recent development, thing, trust, use. (3) Cluster 3, consisting of 10 keywords, which include: fintech lending, focus, indonesian person, islamic financial technology, literature study, personal data, personal information, systematic review, user, welfare. (4) Cluster 4, consisting of 9 keywords, which include: china, direction, evolution, future, india, lender, platform, prospect, publications. (5) Cluster 5, consisting of 9 keywords, which include: covid, importance, inclusion, islamic, islamic financial literacy, level, msme, pandemic, success. (6) Cluster 6, consisting of 8 keywords, which include: fintech ecosystem, gdpr, information, information security, islamic finance, margin, singapore, vietnam. (7) Cluster 7, consisting of 7 keywords, which include: case, challenges, digital era, order, role, sharia fintech, source. (8) Cluster 8, consisting of 5 keywords, which include: fintech firm, international journal, islamic financial technology, islamic fintech, way. (9) Cluster 9, consisting of 4 keywords, which include: factor, financial market, nation, ptp lending.

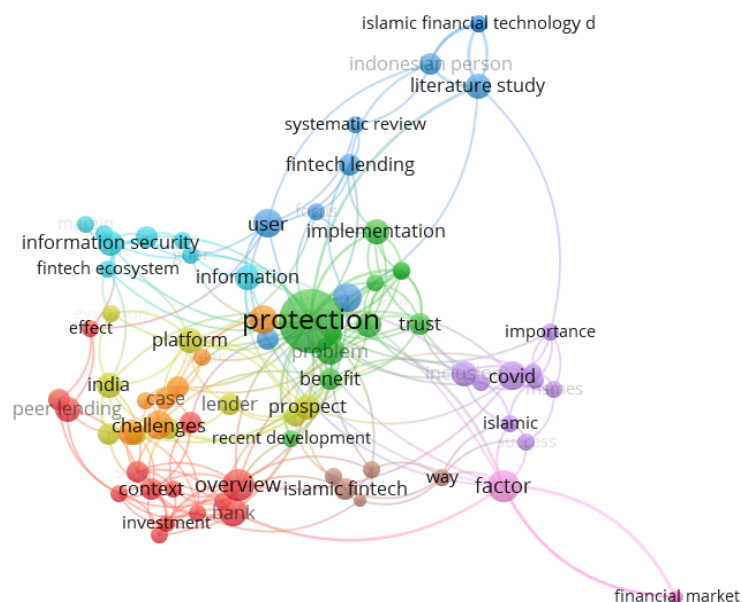


Figure 1. Network Visualization
Source: VosViewer

Furthermore, the results from processing using the VosViewer application yielded a network visualization (see Figure 1), which shows that the keyword "protection" is closely related to the following keywords information, problem, benefit, trust, implementation, user, platform, dan information security. Among these relationships, we were interested in the association between "protection" and "problem." This suggests that these two keywords have emerged as a significant phenomenon and are a major focus of scholars. Additionally, the network visualization revealed that studies conducted between 2019 and 2023 have not linked "protection" with the following terms: bank, investment, Islamic fintech, and financial market. Therefore, future study on data protection could explore associations with these four areas.

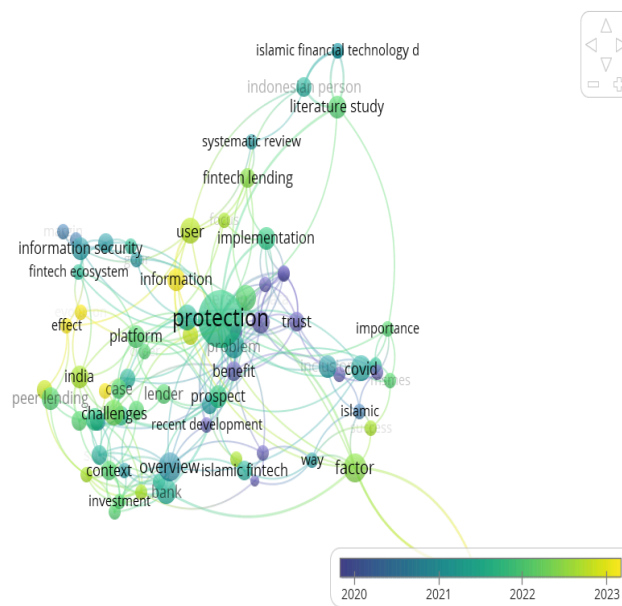


Figure 2. Network Visualization
Source: VosViewer

Moreover, the results of the VosViewer processing also produced an output in the form of an Overlay Visualization, as shown in Figure 2. This figure illustrates that the keywords related to the topic of this study, "personal data protection in Indonesia's P2P Lending" have gained significant attention from 2020 to 2023. Based on our manual examination (see Figure 3), we found consistent results, indicating that the number of articles published since 2020 reached 15, marking a significant increase from 2018 (4 articles) and 2019 (9 articles). The trend continues to rise, peaking in 2023 with 36 articles, which suggests that the keywords related to this study's topic have not yet reached a saturation point and remain a prominent subject of discussion.

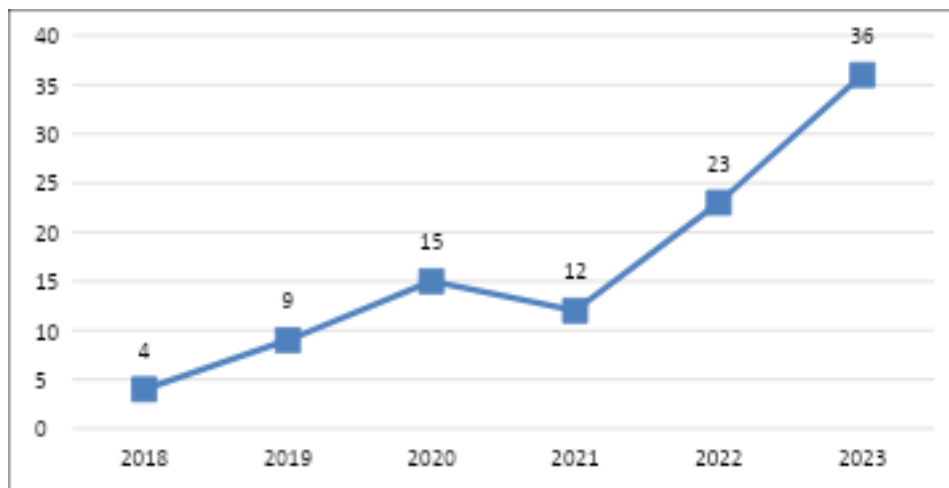


Figure 3. The Number of Articles Published During the 2018-2023 Period
Source: Authors (2024)

Among 99 articles published between 2018 and 2023, we found that only two journals published more than one article, "FinTech" and the "International Journal of Financial Studies". The remaining 97 articles were published in different journals, each with only one article during this period. This indicates that the subject of this study is not concentrated in a specific group of journals (see Table 2).

Table 2. Most Publications Journal

No	Journals	Total Publications
1.	Fintech	2 articles
2.	International Journal of Financial Studies	2 articles

Source: Authors (2024)

Through manual review, we also found that the most cited article related to the subject of this study was written by Djalante et al. (2020), with 1.734 citations. The article, titled "Review and Analysis of Current Responses to COVID-19 in Indonesia: Period of January to March 2020", ranked first. The second to fifth most cited articles were by Fernandes-Caramés & Lamas (2018) with 1.245 citations, Agustina et al. (2019) with 549 citations, Suryono et al. (2020) with 549 citations, and Berg et al. (2022) with 226 citations.

Table 3. Most Cited Articles

No	Authors	Article Titles	Citations
1.	(Djalante et al., 2020)	Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020	1.734 x
2.	(Fernández-Caramés & Fraga-Lamas, 2018)	A Review on the Use of Blockchain for the Internet of Things	1.235 x
3.	(Agustina et al., 2019)	Universal health coverage in Indonesia: concept, progress, and challenges	549 x
4.	(Suryono et al., 2020)	Challenges and trends of financial technology (Fintech): a systematic literature review	342 x
5.	(Berg et al., 2021)	Fintech lending	226 x

Source: Authors (2024)

The final output from VosViewer, Density Visualization (Figure 4), shows that the most frequently discussed keywords related to the subject of this study are challenges covid, overview, information security dan case. On the other hand, the results also indicate that certain keywords, such as MSMEs (Micro, Small, and Medium Enterprises) and inclusion, are rarely mentioned. Therefore, in the future, scholars may consider exploring these two keywords for further study.

CONCLUSION

The growing use of the internet, 221 million users in 2024, has spurred the emergence of Peer-to-Peer (P2P) Lending as a new player in the financial sector. P2P Lending's digital operations, offering fast and easy credit services, have been viewed as a contrast to traditional financial institutions. Furthermore, P2P Lending is often lauded for its potential to improve the national financial inclusion score, which has yet to reach its optimal level. However, P2P has also faced criticism, particularly regarding the misuse of customer data, including privacy violations associated with the collection of loans from individuals with no connection to the customer.

Given the ongoing allegations of personal data misuse by P2P Lending, research on the subject of this study remains highly relevant. Moreover, although there has been considerable discussion on the topic, we observe that no previous study has specifically explored the topic of personal data protection in Indonesia's P2P

Lending through bibliometric analysis. Therefore, this study was conducted to address this gap. This study uses a qualitative method with a bibliometric analysis approach. For the analysis, we use Google Scholar as the database for the articles, and the Publish or Perish (PoP) application to select the articles accessed through Google Scholar. Subsequently, we define the keywords entered into the PoP application, such as “personal data protection, Indonesia's peer-to-peer lending”. The final sample analyzed in this study consisted of 99 articles, which were then processed using the VosViewer application.

This study's results show that the keyword “protection” is frequently studied in conjunction with other keywords such as information, problem, benefit, trust, implementation, user, platform, dan information security. Additionally, the keyword “protection” has not been associated with keywords such as bank, investment, islamic fintech, financial market. These findings are useful for future study that explores the connection between data protection and these four keywords. Furthermore, we also demonstrates that keywords related to the subject of this study, personal data protection in Indonesia’s P2P Lending, began to gain momentum from 2020 to 2023. This indicates that study related to the subject has not yet reached saturation and remains relevant for future investigation. Another conclusion, based on the Density Visualization, is that the most frequently discussed keywords related to the subject of this study are challenges covid, overview, information security dan case. Contrarily, keywords such as MSMES (Micro, Small, and Medium Enterprises) dan inclusion are rarely mentioned. Therefore, this may serve as a consideration for scholars to further explore these two keywords.

This study has limitations, as it only conducts a bibliometric analysis of the subject of “personal data protection in Indonesia’s P2P Lending”. Therefore, future study is encouraged to undertake field studies, including field observations and interviews with P2P Lending firms, the Financial Services Authority (FSA) of the Republic of Indonesia, customers, and the public, to provide a more comprehensive and holistic understanding of the subject.

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