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RESEARCH ARTICLE

Exploring Research Directions on Waqf-Pesantren through Keyword Analysis: A Bibliometric Study

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Abstract: Waqf-based pesantren or waqf-pesantren is a type of property endowment owned by an individual for the benefit of the development and maintenance of an Islamic religious boarding school (pesantren). This study aims to analyze the development and research plans related to the topic of waqf pesantren based on research articles with the same topic. This study used a qualitative research design with a bibliometrics analysis approach. We used the Dimension database to search for research articles in this theme and obtained 191 research articles. Then, the data is processed and analyzed using the VosViewer application to find out the bibliometrics map of the development of research related to waqf-pesantren. The results of the study suggest that this topic has been researched extensively by same authors for the last couple of years. Furthermore, based on the bibliometrics keyword mapping, there are five clusters of the research paths related to waqf-pesantren. Those topics are productive waqf development in waqf-pesantren, the role of Islamic finance in waqf pesantren, micro waqf bank development in pesantren, the benefits of waqf fund in pesantren and pesantren endowment for education. Furthermore, the most widely used key words are waqf, pesantren, Islamic boarding school, development, and education.

Keywords: Waqf-Pesantren, Research Map, Bibliometrics, VosViewer

1. Introduction

Islamic boarding schools, also called madrasa or pesantren, are educational institutions that provide comprehensive Islamic education to students. These schools are designed to immerse students in an environment that emphasizes Islamic values, teachings, and practices. Islamic boarding schools typically have a structured daily schedule that includes academic classes, religious studies, and extracurricular activities. Students live in dormitories and are supervised by teachers and staff who ensure their well-being and adherence to Islamic principles (Kusnadi et al., 2017). The concept of pesantren is deeply rooted in the history of Islamic education, which originated in 16th-century Indonesia. Pesantren are often founded by kyai (Islamic religious leaders) or ulama and serve as centers for Islamic education, community development, and character building (Jallow, 2023).

Against this background, pesantren and waqf are closely related. Waqf is an Islamic financial instrument that involves the establishment of a charitable institution, often in the form of property or other legitimate funds, with the aim of generating income for public and other charitable purposes (Arjmand, 2018). Rofiq et al., (2022) added that waqf is one of the sharia (traditional Islamic religious law) financial instruments that has the potential to be used to develop the national economy. Waqf is also an instrument of community empowerment in Islamic boarding schools (Alhifni et al., 2025; Alhifni & Ahwarumi, 2025). In the context of Islamic boarding schools, waqf can be a source of funding to support education and the maintenance of the institution. For example, Islamic waqf banks are designed to finance



students' education through the use of cash waqf, which is a trust fund established with money to support services for the benefit of humanity in the name of Allah (Munawar & Mufraini, 2021). This funding can be used to cover students' educational and living expenses, so that they can continue their education without financial burden.

Islamic boarding schools, such as madrasa and pesantren, have a long history of using waqf as a means of financing their operations (Suyatno, 2023). In this regard, Islamic boarding schools often rely on income generated from waqf assets to support educational programs, teachers, and students in need (Munawar & Mufraini, 2021). Moreover, modern Islamic boarding schools have implemented various types of waqf programs to increase their autonomy and provide benefits to Islamic scholars and the surrounding community. These programs include property waqf, cash waqf, productive waqf, benefit waqf, professional waqf, and transfer of rights waqf (Mahmassani, 2020).

Due to its benefits to pesantren, waqf has a significant impact on the quality of education in Islamic boarding schools. Waqf can provide financial independence to Islamic boarding schools, allowing them to make decisions about their educational programs and resources without relying solely on government funding or external donations (Arjmand, 2018). This can result in more effective and efficient use of resources and a stronger focus on the educational goals of the institution. Mahmassani, (2020) also stated that waqf can empower Islamic boarding schools to be more independent and able to provide various benefits to Islamic boarding school scholars and the surrounding community. This can help schools become more independent and better prepared to meet the needs of their students and the community. In addition, waqf can foster a sense of community involvement and support for Islamic boarding schools (Lahuri & Lutfiah, 2024). Such sense of involvement can lead to increased resources, better collaboration between schools and the surrounding community, and a stronger sense of shared responsibility for the success of the institution.

However, the implementation of waqf to improve Islamic boarding school faces several challenges including mismanagement and corruption of the assets of waqf that can lead to misuse of funds and failure to support Islamic boarding schools effectively (Shiddiqy et al., 2024). Besides that, the legal framework governing waqf, especially Islamic boarding school waqf, has not been well established or may not provide sufficient clarity for effective waqf implementation in Islamic boarding schools. It is because the availability of sufficient funds and resources is very important for the successful implementation of waqf in Islamic boarding schools. Additionally, other problems such as lack of funding and resources, incomplete records of waqf funds, lack of public awareness and understanding toward waqf programs, poor implementation, and inappropriate audit and compliance practices are things that can hinder the effectiveness of waqf. To address these challenges, it is important to develop and implement effective policies, regulations, and practices that encourage transparency, accountability, and efficiency in the management of waqf assets for Islamic boarding schools.

Therefore, it is important to see the extent of the current development of waqf pesantren through the lens of research findings. One of methods that can be used to see the development of research is bibliometrics approach using VosViewer. This method is able to create and display a map of author journals and research paths based on co-citation data or a keyword map based on joint incident data. A number of relevant studies have applied this approach to analyze the development of waqf in pesantren. Uula, (2025) examined the development of waqf-related research in Gontor Islamic boarding school. The results of that study show several authors who are continually develop studies related to waqf programs. His study also suggests four clusters of research path with topics such as corporate social responsibility (CSR), management of waqf, education, and responsibilities of waqf institution. In addition, his study shows that several keywords such as pesantren, productive waqf, Darussalam Gontor, santri (students) and society as the most frequently used keywords.

Besides Uula, (2025), As-Salafiyah & Slamet Rusydiana, (2022) map the development of research that has been published in the field of Islamic boarding school economics. The results of their study show that the number of publications on the development of research results in the field of the economics of Islamic boarding school has increased quite significantly, especially in the last 10 years. Most of those studies were published in the journal “*Syirkah: Journal of Economics and Business*” and “*the Journal of Religious Research and Religious Education*” (EDUKASI). The most widely researched topics are related to the business fields in Islamic boarding schools such as mini markets and trade, culinary, Islamic Micro Financial Cooperatives (BMT), services, convection, agriculture, animal husbandry, fisheries.

In contrast, Himam & Umam, (2018) study the model of cash waqf linked sukuk for the economic development of the Islamic boarding school. The results of their study find that the respondents agreed at a low level of the cash waqf linked sukuk model. However, the respondents think the most suitable cash waqf linked sukuk model is one given by the government. Similarly, Meilani & Hadziq, (2023) analyze the perceptions of Islamic boarding school teachers towards cash waqf. The results of their study conclude that teachers' perceptions of waqf were relatively the same, but varied in terms of cash waqf. They have diverse views on the regulation of cash waqf, especially after the enactment of UU No. 41 of 2004 concerning waqf. Teachers' responses to interest in cash waqf also varied, with many disagree with the notions. Although they are still apprehensive with the management of the cash waqf, the teachers think that the management of cash waqf should meet the needs of the community.

In recent years, Indonesia has witnessed a rapid transformation of its digital payment system in conjunction with the implementation of various policies by Bank Indonesia. Noteworthy among these policies are the introduction of the Quick Response Code Indonesian Standard (QRIS) and the development of the Digital Rupiah, a form of Central Bank Digital Currency. These developments present opportunities to strengthen Islamic social finance instruments, particularly Cash Waqf, including within the pesantren environment, which has long been characterized by a strong foundation of philanthropy and community participation. The digitization of payment systems has the potential to expand the collection of cash waqf in Islamic boarding schools through mechanisms that are easier, more transparent, and more inclusive. However, this transformation also poses challenges related to governance, integration with the national payment infrastructure, and the institutional readiness of Islamic boarding schools to adopt digital financial technology in an accountable and sustainable manner.

Despite the above studies related to waqf-pesantren, there is still a lack of studies that specifically analyze waqf-pesantren. This present study is important to be conducted to fill the gap. In addition, this study can extend the literature related to waqf-pesantren. Specifically, the purpose of this study is to see the development of research on “waqf pesantren” through the research articles developed around this topic.

2. Literature Review

Waqf is one of the sharia-based financial instruments that has the potential to be used in developing the national economy (Rofiq et al., 2022). Waqf can also be defined as the transfer of funds and other resources from consumption and investment which are then used as productive assets for future benefits, both for individuals and society (Herindar & Rusydiana, 2021). Waqf has been used for various purposes, such as financing education, and has been shown to improve the education system and provide opportunities for the poor and needy (Abdulrezzak, 2016). In Uula's (2025) research, waqf involves consumption resources that are used together as productive assets, which will ultimately increase capital accumulation and income, and one of the important principles in waqf management is prohibiting the sale or conversion into consumptive assets, and must remain as productive assets. One of the popular waqf in the education aspect is waqf in Islamic boarding schools.

Waqf is closely related to pesantren. In this regard, pesantren or Islamic boarding schools are institutions originating from the community, managed by the community and for the advancement of the Muslim community, and this is a private educational institution and managed independently (Ula, 2025). The meaning behind this nature explains that Islamic boarding schools are non-government schools that are based on the spirit of independence in a comprehensive sense, such as systems, curriculum, finance, human resource development, school equipment and others (Bahroni, 2012). Islamic boarding schools or what are known as pesantren have an important role in the education process in Indonesia. They are managed by a combination of teachers, finance, education systems, facilities and infrastructure. Waqf, which is a form of charitable trust, plays an important role in the financial management of these institutions. In the context of Islamic boarding schools, waqf is often used to meet financial needs, such as education costs, by collecting community social funds such as zakat (obligatory charity from Muslims), infaq (charity), alms, and waqf (Putra, 2020; Suhendi et al., 2022). Hadiyanto et al., (2023) emphasized the importance of waqf to provide the independence of Islamic boarding schools, because it provides a sustainable source of income for these institutions.

Several studies with the topic of waqf-pesantren have been performed. Winarsih et al., (2019) analyze the integration of Islamic commercial and socio-economics through the productive waqf to improve the welfare of pesantren. This study specifically examines the relationship among five factors of waqf-pesantren; productive waqf, business units, project financing, human resources, and the welfare of pesantren. While reliability and validity have been tested, the structural relationship between these constructs shows that the integrated model has a strong relationship with the welfare of pesantren in many ways. Related to the profitable business units and commercial activities, human resources have an important role in helping pesantren achieve their best level to realize a growing productive waqf. Specifically, the results of the study show that the five constructs have a significant impact on improving the welfare of Islamic boarding schools, indicating that the model and instruments should be further implemented in Islamic boarding schools.

Meilani & Hadziq, (2023) study the perceptions of Islamic boarding school teachers towards cash waqf. The results of their study concluded that teachers' perceptions of waqf were relatively positive but they have diverse views when it comes to cash waqf after the enactment of UU No. 41 of 2004 concerning waqf. Teachers' responses to interest in cash waqf are generally negative. In general, teachers argue that the management of cash waqf must meet the needs of the community, although there are still doubts about other management. (Himam & Umam, 2018) studied the sukuk waqf model for the development of the Islamic boarding school economy. The results of the study found that respondents agreed at a low level in choosing the model. According to the respondents, they prefer suck given by the government.

Ula, (2025) analyzes the waqf management of Gontor Islamic boarding school. He used the bibliometrics author mapping to find authors who developed studies related to the waqf management of this school. Furthermore, based on the bibliometrics keyword mapping, there are four clusters of research paths with topics related to Corporate Social Responsibility (CSR) and Gontor Waqf, management of Islamic boarding school waqf and Gontor waqf, Education and Gontor waqf, and responsibilities of waqf institutions and Gontor waqf. Furthermore, the most frequently used words are pesantren, productive waqf, Gontor Islamic boarding school, student, and community.

As evidenced by the extant literature on the transformation of digital payment systems, a study conducted by Gupta et al., (2020) elucidates the manner in which the development of cashless ecosystems contributes to increased transaction efficiency, transparency, and the expansion of financial inclusion through the integration of various digital payment platforms. These findings establish a theoretical framework for the development of digital-based Cash Waqf, including within Islamic boarding schools that possess a robust philanthropic community base. The digitization of payments has the potential to facilitate the collection of

monetary waqf in a more accessible and transparent manner. However, its implementation still faces challenges such as technological literacy, transaction security, and institutional readiness to manage digital financial systems in an accountable manner.

Other relevant studies include Siddiq, (2018) who explain the problem of implementing productive waqf in Islamic boarding schools. Wardi, (2016) examines the implementation of cash waqf in Islamic boarding schools while analyze sukuk waqf to achieve sustainable development goals in Islamic boarding schools. Masrifah et al., (2019) looks for the integrated sukuk-based waqf in Islamic boarding schools whereas Fedro et al., (2019) study Islamic boarding school-based waqf. In contrast, Suhendi, (2018) studies the optimization of waqf assets as a source of funds for Islamic boarding schools through institutionalization of waqf.

3. Research Method and Materials

In this study, various research articles related to the theme of waqf-pesantren were used as data sources. Data was collected by searching for research articles indexed by the Dimension database using the keyword waqf-pesantren. After that, research articles relevant to the research theme would be selected based on the publication data that has been collected. Research articles equipped with DOI are the criteria in the data filtering and processing process using software. We found 191 research articles with waqf-pesantren as the theme. The development of publication trends related to the research topic was analyzed using the VosViewer software application, which display the bibliometrics maps and allow for more detailed analysis.

In order to build a research map, VosViewer uses a mapping technique called visualizing similarity to obtain the bibliometrics visualizations for a further analysis. Furthermore, VosViewer is able to create and display the maps for the authors of research articles based on co-citation data or the keyword maps based on co-incident data. Therefore, in this study, an analysis of journal maps related to waqf-pesantren would be carried out. The maps would include the maps of authors and keywords to analyze the research paths for the keywords' clusters.

4. Result and Discussion

This study discusses waqf-pesantren by utilizing 191 research articles indexed in the Dimension database. We used bibliometrics as a method used to measure and evaluate scientific performances by taking into account factors such as citations, patents, publications, and other more complex indicators. Bibliometrics analysis is conducted to evaluate research activities, laboratories, and scientists, as well as the performance of countries and scientific specializations. We applied several stages of bibliometrics analysis such as identifying the background of the research, collecting the databases to be used, and determining the main indicators to be used in the research. This section would show the results of the meta-analysis by showing a visual mapping graph that describes 191 research articles related to waqf-pesantren. In this study, mapping is done by analyzing important or unique keywords and terms contained in journal articles. Mapping is a process to identify elements of knowledge, configurations, dynamics, dependencies, and interactions among those elements. The results of the network visualization of 191 journals with the theme waqf-pesantren would be explained in more detail in the next section.

4.1. Bibliometrics' Author Mapping

By using the bibliometrics analysis using VosViewer software application, a mapping of authors who contribute to the field of waqf-pesantren was obtained. Following image provides a visual representation of the mapping. The larger and brighter the point marked in yellow, the greater the number of research articles related to the theme of waqf-pesantren that have been published by the authors.

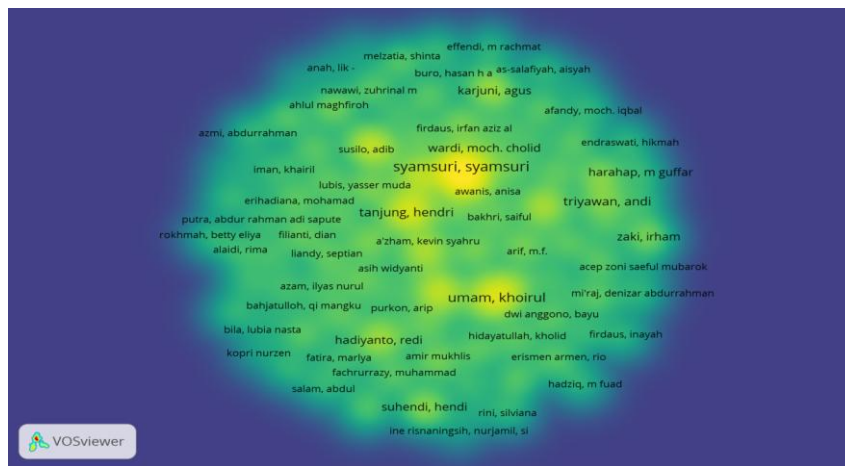


Figure 1. Bibliometric Map

The image above shows the density of clusters in the bibliometrics map. The yellow color on the map suggests the numbers of research articles created by certain authors. Therefore, this section is a very important part to get an overview of the general structure of the bibliometrics map. Through the map analysis, the authors who publish the most works can be identified.

In general, each author or researcher has different tendencies in each publication of his/her work. On some occasions, an author appears as a sole author, but on other occasions the author can write together with other authors or researchers, so that it will affect the cluster density and some clusters show different densities. However, authors who have a fairly large cluster density identify that the author has published the most research articles on the theme of waqf-pesantren, when compared to authors with lower cluster densities. These results can be a reference for other researchers in the future. From the results of the analysis, we found that the authors who frequently published research articles with waqf-pesantren as a theme were Syamsuri, Syamsuri; Huda, Miftahul; Umam, Khoirul; Wibisono, Vina Fithriana; Karjuni, Agus; Wardi, Moch. Cholid; Tanjung, Hendri; Harahap, M Guffar; Triyawan, Andri; Zaki, Irham; Hadiyanto, Redi; and Suhendi, Hendi.

4.2. Research Map

Following image describes the trend of keywords that appear in research articles with waqf-pesantren as a theme. The larger form is the most widely used keyword for research articles with the theme of waqf-pesantren.

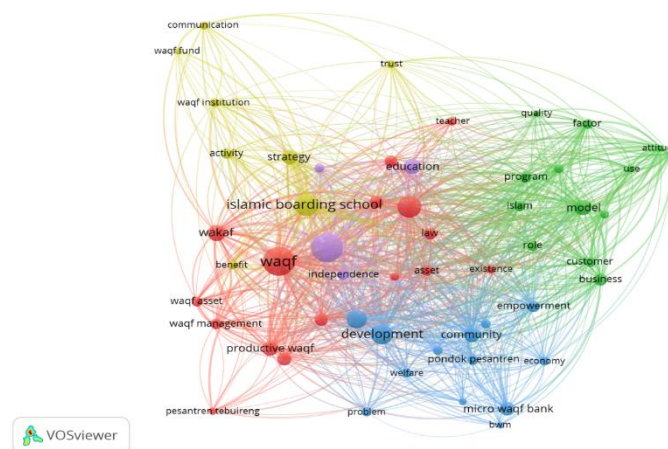


Figure 2. Keyword Map

The map shows that the keywords that appear the most in research articles with the theme of waqf-pesantren are waqf, pesantren, Islamic boarding school, development, and education. We divided them into following clusters:

4.3. First Cluster

Keywords in the first cluster include accordance, asset, cash waqf, existence, foundation, implementation, law, management, Pesantren Tebuireng, productive waqf, student, teacher, wakaf, waqf asset, and waqf management. One of the topics relevant to these keywords is the one that discusses productive waqf development in waqf-pesantren. One of the relevant studies of this cluster is a study of Kasdi, (2019) that explores the role of waqf in modernizing education in Islamic boarding schools. The results of that study show that Islamic boarding schools built with Islamic philanthropy in the form of waqf institutions are a good model for the development of Islamic boarding school education in the contemporary era of Indonesia. The process of developing waqf-pesantren at Gontor Modern Islamic Boarding School and Tebuireng Islamic Boarding School is carried out with several supporting pillars, including the dedication of Islamic boarding school administrators in donating their wealth as waqf, institutionalization of Islamic boarding school waqf professionals in the form of foundation legal entities, productive management of waqf assets, and the productive utilization of waqf for educational development. Then, the pesantren has proven that the foundation nadzir (waqf administrator) has succeeded in managing waqf productively in the pesantren community. This further enhances the existence of the pesantren as an inseparable part of society. Overall, this study shows that pesantren with a waqf institution that has a successful management and utilization of waqf assets is an effective model for developing education in contemporary Indonesia.

In addition, Siddiq,(2018) discusses the problems of implementing productive waqf in Islamic boarding schools in Indonesia. The results of his study indicate that several problems of implementing productive waqf in Islamic boarding schools. First, it is the fact that the positions of Islamic boarding school waqf management systems are not fully owned by public institutions, making the local community less concerned about waqf assets. Second, the official positions of waqf assets whether they automatically belong to the waqf institution or become the property of the owner of the Islamic boarding school are not clear. Third, the nadzirs of waqf are considered not professional. The majority of nadzirs still have a less professional paradigm of waqf as they tend to consume the waqf assets haphazardly. In addition, the haphazard selection process for nadzirs makes their sense of responsibility relatively reduced. It can be concluded that the main problems identified are the lack of community involvement, unclear ownership of waqf assets, and unprofessional managers with a consumerist mindset.

Fadhilah & Azmi, (2024) discuss the potential for developing the halal industry in Indonesia through the utilization of productive waqf in Islamic boarding schools. This study specifically identifies strategies to overcome obstacles in waqf management and encourage economic growth in Islamic boarding schools, which can have a positive impact on the halal industry. Indonesia is ranked fourth out of 15 top countries in the nomination of global Islamic economic indicators in the State of the Global Islamic Economic Report 2022. As a country with one of the largest Muslim populations in the world, Indonesia has the potential to develop its halal industry. Islamic financial instruments, such as waqf, are very important for the halal industry. Many countries, including Indonesia, have shown the effectiveness of using productive waqf in Islamic boarding schools to provide financial support for education. With the number of Islamic boarding schools, totaling 37,614 in Indonesia, these institutions can stimulate the local economy through productive waqf and business ventures that correlate with local geography and emerging potential, such as the use of waqf for business capital or Islamic boarding school business units. Therefore, the economic growth of Islamic boarding schools has a positive impact on the halal industry.

Other relevant studies include Suhendi & Sholeh, (2021) who study the use of productive waqf at the Baitul Hidayah Islamic Boarding School for the digitalization of the da'wah (Islamic preaching) movement. This study found that the school utilized a team with multimedia capabilities, adequate digital infrastructure, and a selection of quality da'wah teachers to produce quality and attractive da'wah content for the millennial generation of Muslims. Fachrurrazy et al., (2022) explore the potential for developing digital-based productive waqf in two Islamic boarding schools in Palopo City, South Sulawesi. This study found that these schools have the potential to utilize productive waqf and digital technology to increase their economic independence. Wijaya & Sukmana, (2020) analyze the role of productive waqf in empowering Islamic boarding schools. The results of the study showed that the Hasyim Asyari Foundation succeeded in managing seven productive waqf units by generating monthly profits of 2.2 billion Rupiah which were used for school development and scholarships for students. All school funding comes from these productive waqf units. Winarsih et al., (2019) explore the integration of Islamic commercial and social economy through productive waqf in Islamic boarding schools to improve their welfare. This study found that the integrated model has a strong relationship with the welfare of Islamic boarding schools, with all five constructs (productive waqf, business units, project financing, human resources, and Islamic boarding school welfare) having a significant impact. This suggests that the model and instruments need to be further implemented in Islamic boarding schools.

4.4. *Second Cluster*

In the second cluster, the keywords include attitude, business, customer, factor, impact, Islam, Islamic financial literacy, model, program, quality, role, society, and use. One of the topics relevant to these keywords is the one that discusses the role of Islamic finance in waqf-pesantren. Research on this topic is relatively rare. One of the relevant studies is the study by Winarsih et al., (2019) which analyzes the integrated Islamic social and commercial economic model that can be applied in pesantren. Institutions based on the self-financing system have implemented waqf as a pillar of their development and have become a potential for developing waqf assets. Productive waqf is considered the main instrument for providing funds to realize its education program. Because both productive waqf and pesantren emphasize sustainability, and because productive waqf can help support the education process in pesantren. This study shows that the integrated model has a strong relationship with the welfare of pesantren in many ways. In relation to business units and commercial activities that generate profits, human resources have a very important role in helping pesantren try their best to realize the productive waqf that is developed. Specifically, the research results show that the five constructs (productive waqf, business units, project financing, human resources and pesantren welfare) have a significant impact on improving pesantren welfare, so the model and instruments need to be further applied in pesantren.

4.5. *Third Cluster*

The keywords in the third cluster include BWM (micro waqf bank), community, development, economy, effort, empowerment, fund, government, institution, micro waqf bank, Islamic boarding school, problem, and welfare. One of the topics relevant to these keywords is one that discusses the micro waqf bank's development in Islamic boarding schools. Several relevant studies include Ahlul Maghfiroh et al., (2022) who examined the role of micro waqf banks in empowering Micro, Small, and Medium Enterprises (MSME) in Islamic boarding schools. The results of the study concluded that the role of micro waqf banks in empowering MSMEs is to provide financing and coaching to BWM customers, where this can be an opportunity for customers to continue their business or meet capital shortages. The coaching provided can control the business while providing assistance in overcoming the difficulties they face.

Cahyaningrat & Mongid, (2022) studied the business processes, business characteristics, and benefits of empowerment programs carried out by Islamic Microfinance Institutions with the micro waqf bank model. The results of the study showed that although the business processes

and business characteristics were similar to other cooperative lenders, the results of economic empowerment felt by customers were very unique. The recipients of financing really felt the benefits of this economic empowerment. These institutions also provide benefits to the surrounding community. The existence of lending institutions under this Islamic boarding school improves the economic welfare of the surrounding community.

Fatira & Nasution, (2019) studied the ability of BWM to improve the welfare of community business groups in Islamic boarding schools. The findings of this study indicate that the Islamic boarding school-based BWM model in Java Island which is applied for community empowerment is carried out using a productive financing model so that the community is able to manage their business with a financing value of 1-3 million rupiah, within a maximum period of 1 year and weekly payments with a maximum margin value of 3%. Building a BWM in Islamic Boarding Schools can be done through data collection of cooperative business entities in the Islamic boarding school environment, obtaining Sharia Microfinance Institution' business permits, obtaining BWM establishment funds, selecting financing customers, and organizing training for selected BWM financing customers.

Aransyah et al., (2022) analyze the policies implemented by the Indonesian Government to develop micro waqf banks. The study find that effective management methods, training, and unsecured financing can optimize the performance of these banks and contribute to economic empowerment and community productivity. Rasyid et al., (2023) examine the impact of Qard (loan) financing on the development of micro-enterprises in Islamic boarding schools. The results of the study show that Qard financing has a significant positive effect on the growth of micro-enterprises, where education and length of business also play a role.

4.6. *Fourth Cluster*

The fourth cluster shows that the main keywords are activity, benefit, communication, Islamic boarding school, strategy, trust, waqf fund, and waqf institution. One of the topics relevant to these keywords is the one that discusses the benefits of waqf funds in Islamic boarding schools. Despite the dearth of studies related to this topic, Azmi et al., (2021) examine the waqf management institutions to develop the benefits of productive waqf by implementing good waqf management strategies and in accordance with the concept and objectives of waqf. With the increasing public interest in waqf fund and the increasing number of waqf management institutions throughout the world and especially in Indonesia. Additionally there has been no desire that can be imitated by waqf management institutions in determining productive waqf fund management strategies to develop the benefits of productive waqf itself. The results of this study conclude that Darussalam Gontor Boarding School has a unique strategy in managing productive waqf funds while still paying attention to the objectives of the existing waqf. Moreover, local people around the Islamic boarding school can also feel the benefits of productive waqf at from this institution.

4.7. *Fifth Cluster*

The keywords in the fifth cluster are education, endowment, independence, and Islamic boarding schools. One of the topics relevant to these keywords is one that discusses Islamic boarding school's endowment for education. Specifically, we found that research related to this topic is still rarely found. Some relevant studies include Syamsuri & Wibisono, (2019) study that discussed the strategy of the Islamic Education Institution (IEI) to raise waqf funds to create economic independence in the era of the 4.0 industrial revolution era. The results of this study indicate that a good waqf fundraising strategy carried out by the nadzir (manager) who can indirectly improve the welfare of the community and create economic independence. In the context of Indonesia, the implementation of blockchain-based financial systems must be examined in conjunction with the evolution of domestic payment infrastructure, such as the Quick Response Code Indonesian Standard (QRIS), which was pioneered by Bank Indonesia. The standardization of payments has been demonstrated to enhance the integration of banking and fintech services, thereby facilitating the enhancement

of Cash Waqf in Islamic boarding schools. This enhancement is achieved through the implementation of more transparent and accountable mechanisms for collecting monetary waqf. Conversely, the emergence of the Digital Rupiah as a form of Central Bank Digital Currency underscores the necessity of aligning financial technology innovations with national monetary policy. This ensures that its application in managing cash waqf at Islamic boarding schools remains integrated with existing payment infrastructure and regulatory frameworks. The waqf fundraising strategy carried out by IEI is to create a long-term strategic program plan, design a long-term budget, develop a fundraising scenario (goals and strategies), identify sources of funds (wakif) through direct and indirect methods, and monitor work results (monitoring and reporting) by reporting work results along with evaluations and future plans.

In this regard, Fedro et al., (2019) described the management strategy of waqf-based Islamic boarding schools implemented by the Modern Darussalam Gontor Islamic Boarding School (PMDG) to develop human resources and entrepreneurship education. The results of the study showed that the strategy of waqf-based Islamic boarding schools aimed at developing human resources and entrepreneurship education was implemented through community-based education (Islamic leaders, teachers, students, and the community). This strategy makes Islamic boarding schools a learning medium combined with the internalization of Islamic values, culture, and philosophy, leadership and strengthening of modern management systems in order to create a quality generation embedded in three factors; faith, knowledge, and charity (good deeds).

5. Conclusion

This study aimed to determine the extent of the development of research related to waqf-pesantren. We used VosViewer software application to search research articles related to the topic. As a result, we obtained 191 research articles with waqf-pesantren as the main topic. Based on the bibliometrics author mapping, we found several authors who frequently wrote research articles related to waqf-pesantren. Those authors are Syamsuri, Syamsuri; Huda, Miftahul; Umam, Khoirul; Wibisono, Vina Fithriana; Karjuni, Agus; Wardi, Moch. Cholid; Tanjung, Hendri; Harahap, M Guffar; Triyawan, Andri; Zaki, Irham; Hadiyanto, Redi; and Suhendi, Hendi. Furthermore, based on the bibliometrics keyword mapping, the development of research related to waqf-pesantren can be divided into five clusters with the most widely used words being waqf, pesantren, Islamic boarding school, development, and education. In addition, based on the frequently used keywords, the results show five research map clusters with topics discussing productive waqf development in waqf-pesantren, the role of Islamic finance in waqf-pesantren, micro waqf bank development in pesantren, the benefits of waqf fund in pesantren and the pesantren' endowment for education. In the broader context of efforts to transform Indonesia's digital financial system, these findings point to promising avenues for future research, particularly in terms of exploring the nexus between cash waqf management in pesantren and the broader cashless payment ecosystem. Such research could encompass the integration of cash waqf with national infrastructure, including the Quick Response Code Indonesian Standard (QR Code IS), and the potential implementation of the Digital Rupiah currency, which has been developed by Bank Indonesia. This integration has the potential to enhance the transparency, efficiency, and accountability of the collection and management of cash waqf in Islamic boarding schools while opening up new avenues for research on the digitalization of Islamic philanthropy.

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