



Research trends in Islamic boarding school economic empowerment

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ABSTRACT

This research is significant given the growing role of Islamic boarding schools (pesantren) as key institutions in fostering socio-economic development and entrepreneurship, particularly in developing countries. Despite growing academic attention, a comprehensive understanding of research trends in this area remains limited. This article aims to systematically analyze the evolution, structure, and thematic focus of research on the economic empowerment of Islamic boarding schools (pesantren). This research employs a bibliometric approach utilizing publications indexed in Scopus from 2017 to 2026. Data were analyzed using VOSviewer to map co-occurrence networks, identify thematic clusters, and visualize research trends through network, overlay, and density analyses. The results show a significant increase in the number of publications over time and identify six main thematic clusters, with "pesantren" and "Islamic boarding schools" as central nodes. These findings indicate a clear shift from community-based empowerment to an entrepreneurial and innovation-driven approach. The dominant themes found include entrepreneurship, Islamic education, and economic empowerment, while emerging topics, such as halal value chains and santripreneurship, offer new research opportunities.

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ABSTRAK

Penelitian ini penting mengingat semakin besarnya peran pondok pesantren sebagai institusi utama dalam mendorong pembangunan sosial-ekonomi dan kewirausahaan, khususnya di negara-negara berkembang. Namun, meskipun mendapatkan perhatian akademis yang terus meningkat, pemahaman yang komprehensif mengenai tren penelitian di bidang ini masih terbatas. Artikel ini bertujuan untuk menganalisis secara sistematis evolusi, struktur, dan fokus tematik penelitian mengenai pemberdayaan ekonomi pesantren. Penelitian ini menggunakan pendekatan bibliometrik dengan memanfaatkan publikasi terindeks di Scopus pada tahun 2017 hingga 2026. Data dianalisis menggunakan VOSviewer untuk memetakan jaringan kemunculan bersama (co-occurrence networks), mengidentifikasi kluster tematik, serta memvisualisasikan tren penelitian melalui analisis jaringan, overlay, dan analisis kepadatan. Hasil penelitian menunjukkan adanya peningkatan yang signifikan dalam jumlah publikasi seiring berjalannya waktu serta mengidentifikasi enam kluster tematik utama, dengan "pesantren" dan "Islamic boarding school" sebagai simpul pusat. Temuan ini mengindikasikan adanya pergeseran yang jelas dari pemberdayaan berbasis masyarakat menuju pendekatan yang digerakkan oleh kewirausahaan dan berorientasi pada inovasi. Tema-tema dominan yang ditemukan meliputi kewirausahaan, pendidikan Islam, dan pemberdayaan ekonomi, sementara topik-topik yang baru berkembang, seperti rantai nilai halal (halal value chains) dan santripreneurship, menawarkan peluang penelitian baru.

Kata Kunci: pemberdayaan ekonomi; pendidikan kewirausahaan; pesantren

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INTRODUCTION

The financial sustainability of educational institutions has emerged as a critical global issue due to increasing operational costs, limited public funding, and growing expectations for educational quality and institutional accountability (Khan et al., 2022; Scott & Guan, 2023). These challenges have encouraged many educational organizations, particularly faith-based institutions, to explore innovative strategies for generating sustainable income while preserving their educational missions (Biancardi et al., 2023). Within this context, Islamic boarding schools (*pesantren*) have gained increasing recognition as institutions capable of integrating religious education with community-based economic activities (Muiz et al., 2025; Susanto et al., 2025; Yugo, 2025). Beyond their traditional role in providing Islamic education, many *pesantren* have developed entrepreneurial initiatives, productive business units (Gustiana, 2026; Kholilah et al., 2025), and community empowerment programs that contribute to local economic development and institutional self-reliance (Purwoko, 2022).

That transformation reflects a broader global movement toward educational models that combine academic excellence with economic resilience and social impact. Consequently, researchers and policymakers have shown growing interest in understanding how *pesantren* contribute to sustainable development through economic empowerment. The continuous increase in scholarly publications on this topic demonstrates that Islamic boarding school economic empowerment has become an emerging and rapidly expanding field of international research. Recent years have witnessed a significant increase in scholarly attention to the economic empowerment of Islamic boarding schools, reflecting the growing recognition of their contribution to both educational sustainability and local economic development.

The expanding body of research encompasses a wide range of themes, including entrepreneurship development, community empowerment, social enterprise, *pesantren*-based business management, sustainability, Islamic social finance, and agribusiness (Mariyono, 2025; Hafidh et al., 2024; Hanif et al., 2023; Harjawati et al., 2026; Qizam et al., 2025). These studies have enriched the understanding of how *pesantren* diversify their economic functions while maintaining their educational and religious missions. However, the literature has evolved across multiple disciplines and research perspectives, resulting in fragmented knowledge with limited integration among emerging themes. Existing studies tend to focus on specific issues or case contexts rather than providing a comprehensive view of the field as a whole. Despite this growing body of literature, the evolution of research themes and intellectual structure remains insufficiently understood. Although research on Islamic boarding school economic empowerment has grown substantially, several important knowledge gaps remain.

Existing studies predominantly examine specific programs, institutional practices, or localized case studies, leaving the broader development of the field insufficiently explored. There is still no comprehensive mapping of how research has evolved, making it difficult to identify shifts in thematic priorities and emerging areas of inquiry. Moreover, the intellectual relationships among key research themes remain fragmented, while the contributions of influential authors, leading journals, productive countries, and international collaboration networks have not been systematically analyzed. This lack of synthesis also limits the

identification of research frontiers and future directions that could guide subsequent investigations. Consequently, although research on Islamic boarding school economic empowerment continues to expand, comprehensive studies that systematically map its intellectual development, thematic evolution, collaboration networks, and emerging research directions remain scarce. Previous review studies have contributed to the understanding of Islamic boarding schools by examining specific aspects such as entrepreneurship, *pesantren*-based economic activities, Islamic education, and community development (Wibowo et al., 2022; Jais et al., 2025; Muhajir, 2022).

These reviews have highlighted the diverse roles of *pesantren* in promoting socio-economic welfare and educational sustainability, yet their scope has generally been limited to thematic discussions within particular domains. Most existing reviews rely on conventional narrative approaches, which provide valuable descriptive insights but have limited capacity to evaluate the field's intellectual landscape systematically. Furthermore, few studies have combined a systematic literature review with bibliometric techniques to examine publication trends, thematic evolution, influential authors, collaborative networks, and the knowledge structure that underpins this growing area of research. As a result, existing reviews provide valuable insights but do not comprehensively reveal the structure and evolution of this research field. This study addresses the identified gaps by providing a comprehensive analysis of research trends in Islamic boarding school economic empowerment through an integrated bibliometric and systematic review approach.

Specifically, it aims to map the growth of scientific publications, identify dominant and emerging research themes, examine the evolution of scholarly focus over time, analyze collaboration patterns among authors, institutions, and countries, and uncover research frontiers that may shape future investigations. Methodologically, the study combines Bibliometric Analysis to generate both quantitative and qualitative insights into the field. Bibliometric visualization is conducted using VOSviewer, while the analysis is based on publications indexed in the Scopus database to ensure broad international coverage and high-quality scholarly sources. This integrated approach provides a more comprehensive understanding of the intellectual development and research dynamics within this rapidly expanding field. This study is expected to make significant contributions to the growing body of knowledge on Islamic boarding school economic empowerment from theoretical, methodological, and practical perspectives.

LITERATURE REVIEW

Economic Empowerment Of Islamic Boarding Schools

The concept of Islamic boarding schools refers to traditional Islamic educational institutions in Indonesia, characterized by unique teaching methods, curricula, and character-building approaches for students (*santri*). Historically, *pesantren* have served as important centers for the transmission of Islamic knowledge and the moral development of society (Azizah et al., 2023). In this context, self-reliance refers to a *pesantren*'s ability to manage and sustain its internal resources effectively, including financial resources, human capital, and institutional development programs, without excessive dependence on external assistance (Hafidh et al., 2026). In practice, the idea of *pesantren* self-reliance is often reflected in the

establishment of productive economic enterprises, such as agriculture, livestock farming, and small-scale industries or handicraft production (Kurniady et al., 2024). The outcomes of these activities are frequently used to support the *pesantren*'s operational sustainability while also contributing to the welfare of students and the surrounding community. The expansion of *pesantren* business initiatives has generated significant economic and educational benefits. Economic independence is often achieved by establishing business units that generate revenue to support institutional operations and reduce reliance on tuition fees and external financial assistance (Ramadini et al., 2023).

Beyond their financial contribution, these business activities also serve as practical learning environments that equip students with entrepreneurial knowledge, managerial skills, and economic competencies. As a result, *pesantren* contribute not only to inclusive economic growth but also to the development of human resources characterized by strong moral values, entrepreneurial capabilities, and economic resilience. This multifaceted economic engagement positions *pesantren* as critical engines of local economic development, particularly through the professional management of productive waqf and other income-generating initiatives (Fadhilah & Azmi, 2024; Wahab et al., 2025). By optimizing religious and economic resources, *pesantren* can establish sustainable business activities that support institutional development and create economic opportunities for surrounding communities. These initiatives demonstrate how *pesantren* have evolved beyond their traditional educational role to become active contributors to local economic ecosystems.

The economic activities of *pesantren* are diverse, ranging from business development and community empowerment to entrepreneurship education, thereby playing a critical role in poverty reduction, particularly in rural areas (Ashfahany et al., 2024). This economic engagement is reflected in various institutional initiatives, including *pesantren* business holdings, the One Pesantren One Product (OPOP) program, and Pesantren Sarekat Business Cooperatives, particularly in regions such as East Java (Faiza, 2021). These initiatives are designed to strengthen *pesantren*'s productive capacity, expand economic opportunities for surrounding communities, and enhance the sustainability of *pesantren*-based enterprises. Through these programs, *pesantren* have increasingly positioned themselves as active participants in local and regional economic development. The economic benefits generated through these initiatives extend beyond institutional sustainability.

Economic autonomy enables *pesantren* to maintain operational continuity, reduce dependence on external funding, and reinvest resources into educational and social programs. Moreover, revenue generated from entrepreneurial activities can be used to empower disadvantaged communities through job creation, business incubation, and community-based entrepreneurship programs. As a result, *pesantren* contribute not only to economic growth but also to poverty reduction and broader social inclusion within rural communities. These institutions often establish internal business units, such as supermarkets or grocery stores, to generate revenue to cover operational costs and finance various *pesantren* activities (Awaluddin et al., 2023). This strategic approach to financial management, often bolstered by social capital and entrepreneurial ecosystems, enables *pesantren* to achieve greater economic independence and sustainability.

Economic self-reliance within *pesantren* represents a crucial foundation for sustaining the institution's educational and social functions without excessive dependence on external

assistance (Fanani & Hakim, 2022). The concept refers to *pesantren*'s capacity to formulate ideas, strategies, and economic development models that strengthen institutional resilience, ensure long-term sustainability, and support the fulfillment of internal needs. Importantly, the pursuit of economic self-reliance is not solely driven by financial considerations but is also closely linked to the preservation of *pesantren* identity, Islamic values, and theological principles as Islamic educational institutions. The spirit of self-reliance has historically been embedded within the *pesantren* tradition. Since their establishment, many *pesantren* have relied on internally generated resources and community support to sustain their operations (Budiyo, 2025).

Religious leaders (*Kiyai*) and *santri* traditionally worked together to meet daily needs through community-based initiatives, charitable endowments (*Waqf*), and independently managed economic activities. These practices not only supported institutional continuity but also reinforced the values of cooperation, responsibility, and social solidarity that characterize *pesantren* life. Building upon this historical foundation, the role of *pesantren* has expanded beyond religious education to encompass broader socio-economic responsibilities. As social and economic challenges have become increasingly complex, *pesantren* have been encouraged to participate more actively in community empowerment and local economic development. This transformation has required *pesantren* to adapt their traditional self-reliance practices into more structured and sustainable economic initiatives. Consequently, economic empowerment has emerged as a strategic instrument for enhancing institutional sustainability and increasing *pesantren*'s social and economic contributions to the wider community (Thoha, 2024).

From a theoretical perspective, efforts to achieve economic self-reliance in *pesantren* can be understood through the framework of empowerment theory, which emphasizes strengthening the capacity and capability of marginalized groups to become more independent. In the *pesantren* context, this approach is often implemented through *santripreneurship* programs that integrate Islamic values with entrepreneurial skills (Hamzah, 2026). The objective is not merely to produce financially independent graduates but also to cultivate individuals who are capable of managing businesses grounded in social responsibility and ethical values. Previous studies indicate that *pesantren* economic development models commonly involve diversifying into business sectors such as cooperatives, agribusiness, trade enterprises, and Islamic microfinance institutions, all of which contribute to financial sustainability.

The effectiveness of these initiatives largely depends on *pesantren*'s ability to combine Islamic principles with modern business management practices, while also encouraging active participation from local communities, alum networks, and institutional leadership. Despite these developments, the pursuit of economic self-reliance within *pesantren* continues to face some challenges (Suwendi et al., 2024). These include suboptimal asset management, limited human resource capacity in areas such as digital marketing and business management, and the absence of professional financial recording systems. Addressing these constraints requires *pesantren* to optimize the use of local resources, strengthen the management of productive *waqf*, and establish strategic partnerships with external stakeholders (Hambari et al., 2026; Ibrahim et al., 2026). Innovation in sectors such as organic agriculture, creative industries, and community-based enterprises also plays an important role in expanding income sources and improving competitiveness.

Consequently, strengthening professional economic management, enhancing human resource quality through continuous training, and integrating technology into institutional operations are essential steps toward developing *pesantren* that are not only strong in religious education but also economically independent and sustainable in their efforts to empower society.

Previous Research

Existing studies on the economic role of *pesantren* have predominantly concentrated on three interconnected areas: the implementation of economic empowerment initiatives (Muiz et al., 2025), the development and management of *pesantren*-based business units (Sholahuddin, 2024), and the attainment of institutional financial sustainability and independence (Nashir & Noor, 2025; Suwendi et al., 2024). Collectively, these studies demonstrate an increasing recognition of *pesantren* as multidimensional institutions that extend beyond their traditional religious and educational functions to play a significant role in local economic development and community empowerment. Existing studies have extensively examined economic empowerment programs, entrepreneurship development, business unit management, and financial independence within *pesantren*. These studies collectively demonstrate the growing economic role of *pesantren* in supporting community welfare and institutional sustainability.

However, the literature remains fragmented, with most studies focusing on specific economic activities rather than the broader governance mechanisms that enable long-term success. Moreover, limited attention has been paid to how multiple stakeholders, including government, academia, industry, communities, and the media, collaborate to support *pesantren*'s economic development. Consequently, the role of collaborative governance in strengthening *pesantren* economic independence and sustaining educational programs remains underexplored, highlighting an important gap for future research. First, a significant body of literature examines various economic empowerment programs implemented within *pesantren* (Muhyiddin et al., 2022; Rahmah et al., 2024). These programs often include vocational training, skill development initiatives, and community-based economic projects aimed at enhancing the economic capacity of both students (*santri*) and surrounding communities.

Such initiatives are frequently aligned with Islamic values, emphasizing ethical entrepreneurship and social welfare (Rangkuti, 2023; Yasmeen, 2026). Second, many studies explore the establishment and management of *pesantren*-based business units (Hafidh et al., 2026). These enterprises range from small-scale retail and agricultural activities to more structured ventures such as cooperatives and production units (Hafidh et al., 2024; Kurniady et al., 2024). Research in this area highlights how these business entities function as practical learning platforms while simultaneously generating income to support institutional sustainability. Third, financial independence has emerged as a central theme in the literature. Scholars emphasize the importance of reducing reliance on external funding sources by developing self-sustaining economic models. In this context, *pesantren* are increasingly viewed as institutions capable of building autonomous financial systems through diversified economic activities. Commonly adopted strategies include establishing income-generating business units, developing cooperatives, managing productive waqf assets, and implementing entrepreneurship-based programs that create sustainable revenue streams.

These initiatives not only strengthen the financial resilience of *pesantren* but also enable them to maintain educational services, expand community empowerment programs, and support long-term institutional sustainability.

METHODS

This study uses a bibliometric approach to analyze literature reviews in education published between 2017 and 2026. This study adapts the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to conduct bibliographic visualization and analysis, following these steps in **Figure 1**.

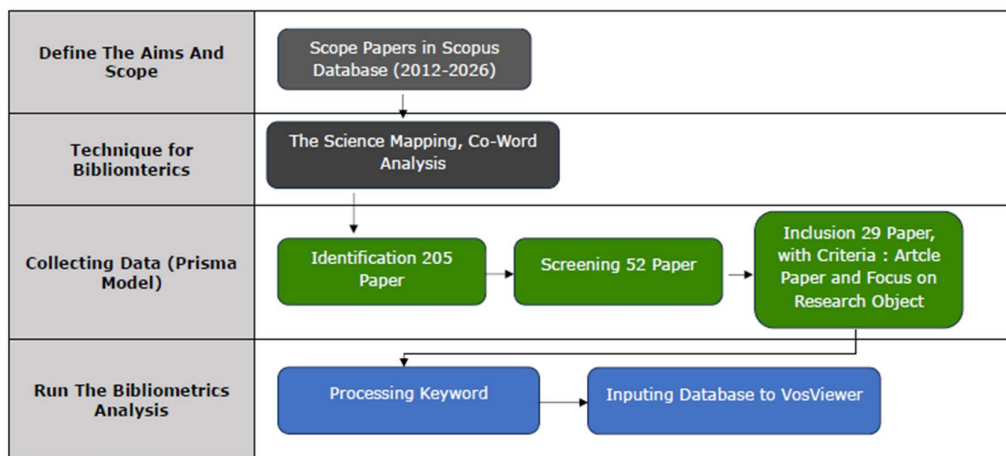


Figure 1. Step Bibliographic Visualization and Analysis
Sources: Processed by the authors, 2026

As shown in **Figure 1**, the research stages include: 1) defining the research objectives and scope; 2) selecting bibliometric techniques; 3) collecting data; and 4) analyzing the data. The research stages are described in detail below:

Defining Research Objectives and Scope

The process begins by defining the research objectives and scope, followed by identifying publications indexed in the Scopus database covering the period from 2012 to 2026. Scopus was selected for this study not only for its extensive coverage but also for the accuracy and depth of the bibliographic information it provides, including titles, abstracts, and author-defined keywords, which facilitates more precise and relevant searches. The system hosts a diverse collection of peer-reviewed international journals spanning various disciplines, making it a valuable resource for a comprehensive exploration of the literature.

Selection of Bibliometric Techniques

Subsequently, this study employs science mapping and co-word analysis as the primary bibliometric techniques to explore the conceptual structure and thematic relationships within the literature. These techniques are applied following a systematic, structured procedure

comprising four interconnected stages, designed to comprehensively explore the development, characteristics, and intellectual structure of the research field.

Data Collection

The Scopus database was utilized to collect relevant publications on *pesantren* using keywords such as TITLE-ABS-KEY ("pesantren" OR "Islamic boarding school") AND ("economic empowerment" OR "community empowerment" OR entrepreneurship OR "income generation"). The search yielded 205 identified publications. A screening process was then conducted, resulting in the retention of 52 articles. Finally, the articles were assessed for eligibility based on publication type and relevance, resulting in a final selection of 29 articles.

Data Analysis

In the final stage, the selected publications underwent keyword processing before being imported into VOSviewer for bibliometric visualization, enabling the identification of research themes, keyword networks, and the intellectual structure underlying the field of economic empowerment in Islamic boarding schools.

RESULTS AND DISCUSSION

The results showed that the number of citations per document was 5,38; the number of Co-Authors per document was 3.92; the number of citations per article was 2.08; the percentage of international co-authorships was 26,98; and the number of authors was 225.

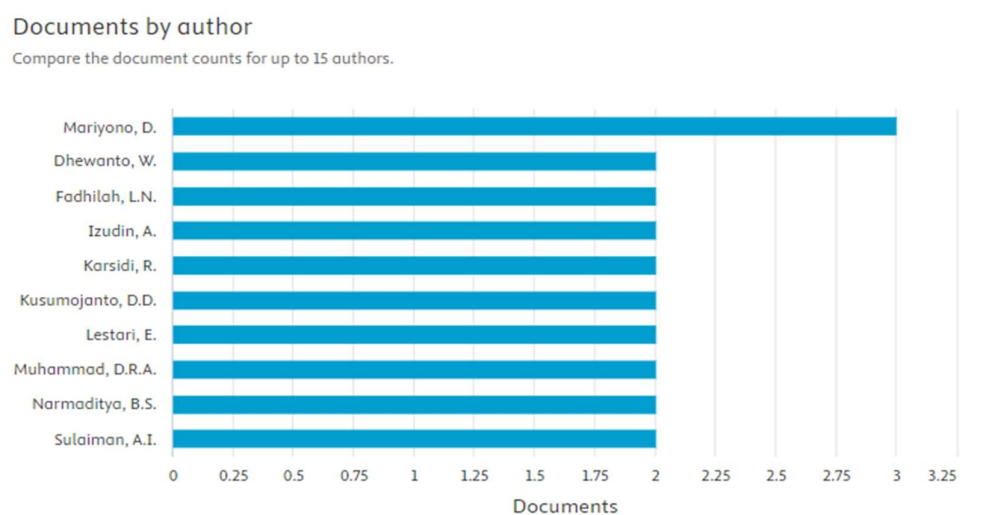


Figure 2. Authors With the Most Documents
Sources: Scopus database analysis results, accessed Feb 2026

Figure 2 shows several examples of published articles searched using the Scopus database. The sample data shows the authors with the most documents on this topic.

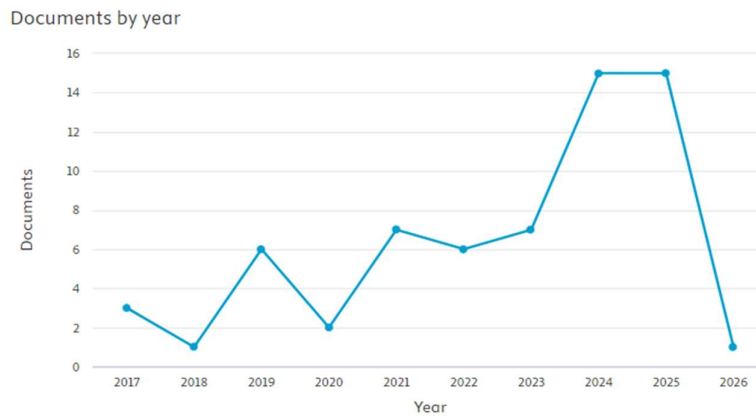


Figure 3. Development of Published Articles Each Year
Sources: Scopus database analysis results, accessed Feb 2026

Figure 3 illustrates the annual distribution of Scopus-indexed publications from 2017 to 2026, revealing a dynamic trend in the field's development. In the initial phase (2017–2019), the number of publications remained relatively low, beginning with approximately 3 publications in 2017, declining to 1 in 2018, and rising to 6 in 2019. This pattern indicates the early stage of scholarly attention, where interest in the topic is emerging but remains limited. From 2020 to 2023, the trend shows moderate fluctuations: publications decreased to 2 in 2020, increased to 7 in 2021, declined slightly to 6 in 2022, and rose again to 7 in 2023.

This phase reflects a transitional stage, marked by increasing consistency in research output, suggesting that the topic is gaining recognition but has not yet reached full maturity. A significant increase is observed in 2024 and 2025, with the number of publications peaking at around 15 per year. This sharp rise indicates a substantial expansion of academic interest, likely driven by increased research collaboration, broader thematic exploration, and the topic's relevance in contemporary discourse. However, the apparent decline in one document in 2026 should be interpreted with caution, as it is most likely due to incomplete indexing or publication delays rather than a genuine decrease in research activity. Overall, the trend demonstrates a clear progression from an emerging research area to a more established, rapidly growing field.

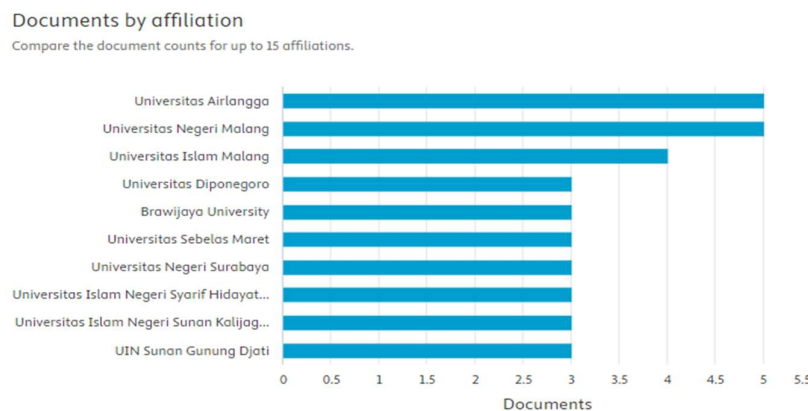


Figure 4. Document by Affiliation Institutions
Sources: Scopus database analysis results, accessed Feb 2026

Figure 4 presents the distribution of publications by institutional affiliation, highlighting the most productive universities in the dataset. Universitas Airlangga and Universitas Negeri Malang emerge as the leading contributors, each producing five documents, indicating a strong research engagement in this field. They are followed by Universitas Islam Malang with four publications, demonstrating a slightly lower but still significant contribution. Several other institutions, including Universitas Diponegoro, Brawijaya University, Universitas Sebelas Maret, Universitas Negeri Surabaya, UIN Syarif Hidayatullah Jakarta, UIN Sunan Kalijaga, and UIN Sunan Gunung Djati, each contribute three documents. This distribution suggests that research on the topic is relatively concentrated within a cluster of Indonesian higher education institutions, with moderate productivity shared among several universities rather than being dominated by a single institution.

Documents by subject area

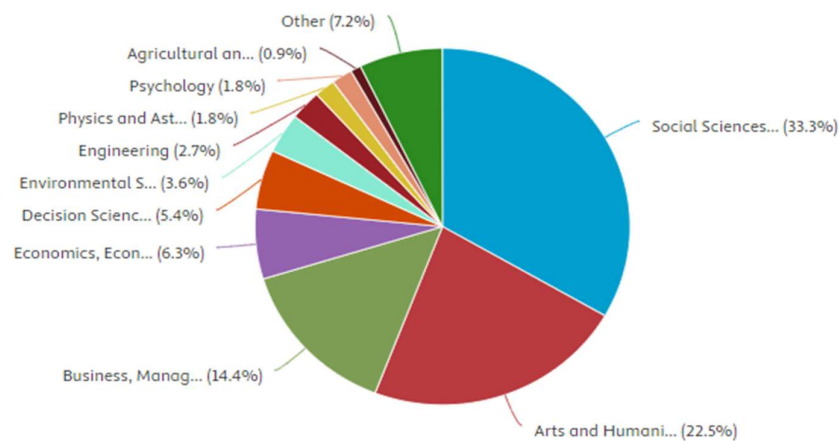


Figure 5. Subject Area Publication

Sources: Scopus database analysis results, accessed Feb 2026

Figure 5 illustrates the distribution of publications across subject areas, revealing that the research is predominantly concentrated within the social sciences, which account for the largest share at 33.3%. This is followed by arts and humanities at 22.5%, indicating a strong emphasis on socio-cultural and educational perspectives. The fields of business, management, and accounting account for 14.4%, reflecting growing interest in economic and managerial aspects, while economics, econometrics, and finance account for 6.3%, highlighting the relevance of financial and economic analysis within the topic.

Other subject areas, such as decision sciences (5.4%), environmental science (3.6%), and engineering (2.7%), make moderate contributions, suggesting some interdisciplinary engagement. Meanwhile, smaller proportions are observed in physics and astronomy (1.8%), psychology (1.8%), and agricultural sciences (0.9%), with the remaining fields collectively accounting for 7.2%. Overall, the distribution demonstrates that the research domain is heavily rooted in social and humanities disciplines, while also incorporating a diverse range of supporting fields, indicating a multidimensional and interdisciplinary research landscape.

Visualization of Search Topics With VOSviewer

Computational mapping was conducted using bibliographic data retrieved from the Scopus database and analyzed through VOSviewer to identify the conceptual structure and thematic relationships within the research field. The co-occurrence analysis revealed a network of interconnected keywords, grouped into six distinct clusters, indicating several major research streams. Cluster 1 comprises the keywords entrepreneurial spirit, entrepreneurship, financing, Islamic education, *pesantren*, and *santri*, highlighting studies that focus on integrating entrepreneurial values and financial capacity-building into Islamic educational institutions. Cluster 2 includes empowerment, entrepreneurship and sustainability, qualitative research, social capital strengthening, sustainable development, and sustainable empowerment, reflecting a research orientation toward community empowerment, sustainability, and the role of social capital in supporting long-term development.

Cluster 3 comprises entrepreneurial intention, entrepreneurial mindset, entrepreneurship education, Islamic boarding school, and Islamic values, emphasizing the importance of educational interventions and religious values in shaping entrepreneurial attitudes and intentions among students in Islamic boarding schools. Furthermore, the mapping results identified three additional thematic clusters that complement the broader research landscape. Cluster 4 comprises boarding schools, community empowerment, Indonesia, and the SDGs, indicating a growing interest in the contributions of Islamic boarding schools to community development and to the achievement of the SDGs at the national level. Cluster 5 includes economic empowerment, the halal value chain, Islamic boarding schools, and *santripreneurship*, highlighting research that explores strategies for strengthening the economy through halal-based economic ecosystems and entrepreneurship initiatives among students.

Meanwhile, Cluster 6 is represented by the keywords boarding school and management, reflecting studies that focus on institutional governance, organizational management, and administrative aspects of Islamic boarding schools. Collectively, these six clusters demonstrate that the literature has evolved around three dominant dimensions, namely entrepreneurship development, community and economic empowerment, and institutional management. The interconnectedness among these themes suggests that contemporary research increasingly views Islamic boarding schools not only as religious educational institutions but also as strategic actors in fostering economic resilience, sustainable development, and community transformation. In the VOSviewer visualization, a cluster refers to a group of items (such as keywords, authors, or documents) that are strongly interconnected through co-occurrence or co-citation relationships (Bukar et al., 2023; Martins et al., 2024).

A distinct color represents each cluster and reflects a specific theme or subtopic within a research domain (McAllister et al, 2022). Items grouped within the same cluster tend to frequently appear together in the literature, indicating conceptual proximity and a shared research focus. Within this visualization, clusters facilitate the identification of the field's intellectual structure, for instance, by illustrating the interconnections among "*pesantren*," "entrepreneurship," and "economic empowerment." The spatial distance between items signifies the strength of their relationship; the closer the items, the stronger their association. Additionally, node size represents frequency of occurrence, while connecting lines (links)

indicate the strength of relationships between items. The images analyzed in this article consist of Network Visualization (see **Figure 6**), Overlay Visualization (see **Figure 7**), and Density Visualization (see **Figure 8**).

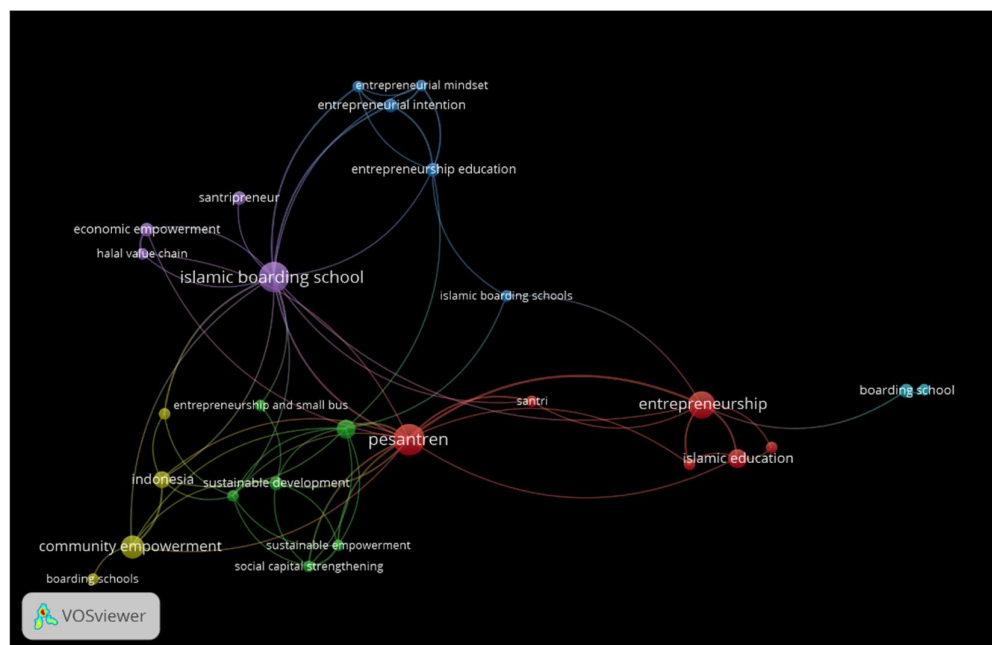


Figure 6. Network Visualization Research Topic

Sources: Authors' visualization using VOSviewer based on Scopus-indexed publications (2026).

Figure 6 illustrates the interrelationships among the identified terms as an interconnected network. The figure also demonstrates the clustering of frequently occurring terms related to economic empowerment in Islamic boarding schools in the Scopus database. From the network visualization, it can be seen that the search for the topic of Islamic boarding school students comprises 6 clusters, with a total of 66 links and 87 link strengths. The network visualization reveals that entrepreneurship (Anggadwita et al., 2021), empowerment (Naimah et al., 2020), and Islamic boarding schools constitute the core structure of the research field. The strong connections among these keywords suggest that contemporary studies increasingly conceptualize *pesantren* not merely as religious institutions but as agents of socio-economic transformation.

Furthermore, the figure presents a network visualization generated with VOSviewer, illustrating the co-occurrence relationships among key terms in the research domain of Islamic boarding schools (*pesantren*). The map is structured into several color-coded clusters, each representing a distinct thematic grouping. At the center of the network, "Islamic boarding school" and "*pesantren*" emerge as dominant nodes, indicating their high frequency and central role in the literature. These central terms are strongly connected to multiple clusters, reflecting their integrative function across research themes. The red cluster highlights the linkage between "entrepreneurship," "Islamic education," and "*santri*," suggesting a focus on entrepreneurial development within Islamic educational contexts.

The blue cluster emphasizes "entrepreneurial intention," "entrepreneurial mindset," and "entrepreneurship education," indicating a conceptual strand focused on the cognitive and

educational aspects of entrepreneurship. Meanwhile, the green and yellow clusters are associated with "sustainable development," "community empowerment," "social capital strengthening," and "Indonesia," reflecting a socio-economic development perspective. The purple cluster connects "economic empowerment," "halal value chain," and "*santripreneur*," underscoring *pesantren*'s role in Islamic economic ecosystems.

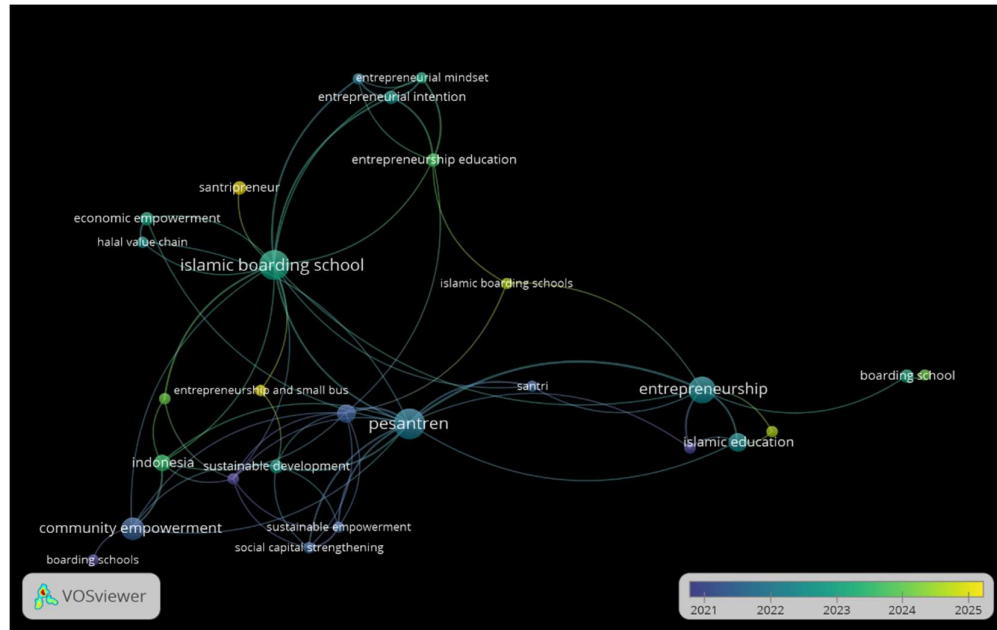


Figure 7. Overlay Visualization Research Topic

Sources: Authors' visualization using VOSviewer based on Scopus-indexed publications (2026)

Figure 7 presents an overlay visualization generated with VOSviewer that illustrates the temporal evolution of research themes related to Islamic boarding schools (*pesantren*). The overlay visualization indicates a temporal shift in research interests. Earlier studies primarily focused on community empowerment and social development, whereas more recent studies have concentrated on entrepreneurial intention, entrepreneurial mindset, and entrepreneurship education. This transition reflects the growing emphasis on capability development and innovation-oriented approaches within *pesantren* (Hakim et al., 2025). In this visualization, node colors represent the average publication year for each term, ranging from earlier studies (depicted in darker blue) to more recent developments (indicated by green-to-yellow gradients).

The terms "*pesantren*" and "Islamic boarding school" occupy central positions within the network, signifying their foundational role and sustained relevance across different periods of research. The figure presents an overlay visualization of search results for economic empowerment in Islamic boarding schools. This overlay illustrates the emergence and intensity of term usage over time. The figure shows that research on this topic has attracted substantial attention in Scopus-indexed journals from 2016 to 2026. The variation in colors reflects the temporal progression of the research, highlighting how the Focus on Islamic boarding school economic empowerment has evolved over the years.

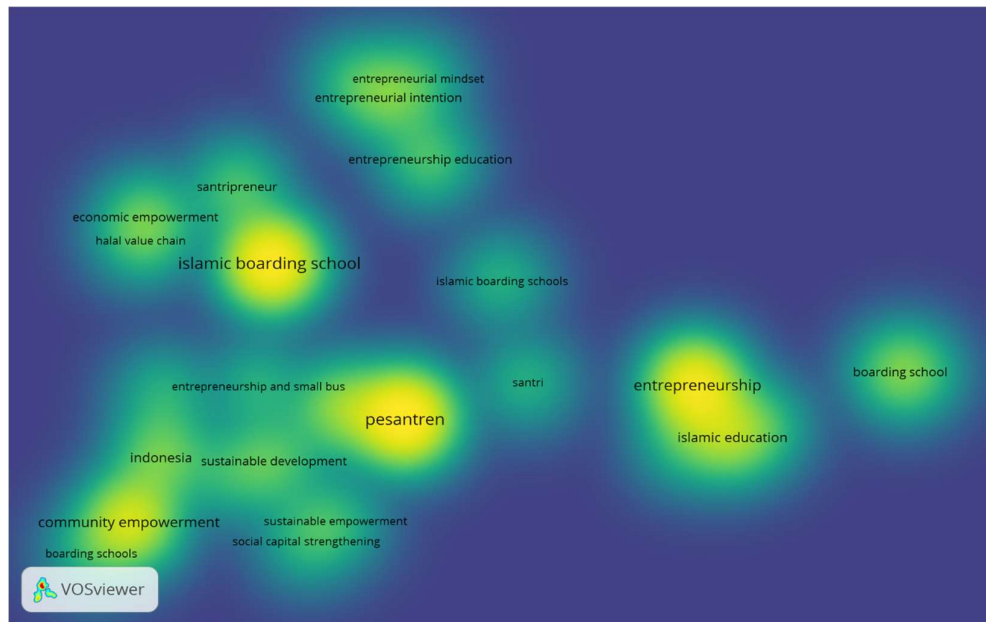


Figure 8. Density Visualization Topic Research

Sources: Authors' visualization using VOSviewer based on Scopus-indexed publications (2025)

In a bibliometric analysis, the density of the theme under study can be identified from its distribution, as shown in **Figure 8**. The density visualization shows that entrepreneurship, empowerment, and Islamic boarding schools are prominent themes in the literature. In contrast, topics related to collaborative governance, institutional innovation, and sustainability-oriented economic models appear less prominent, suggesting potential directions for future research. The figure presents a density visualization generated with VOSviewer, illustrating the concentration and prominence of research topics on Islamic boarding schools (*pesantren*). In this map, color intensity represents the frequency and co-occurrence density of terms, with warmer colors (yellow) indicating highly studied and frequently occurring topics, and cooler colors (green to blue) indicating less prominent or emerging areas.

The terms "*pesantren*" and "Islamic boarding school" are the most dominant nodes, highlighted in bright yellow, indicating their central importance and high frequency in the literature. Closely associated with these core terms are themes such as "entrepreneurship" and "Islamic education," which also exhibit strong density, indicating substantial scholarly attention. Surrounding these central areas are moderately dense topics, including "entrepreneurial intention," "entrepreneurial mindset," "entrepreneurship education," and "*santri*," reflecting a growing emphasis on human capital development and entrepreneurial capacity within Islamic educational institutions. Furthermore, the figure shows the density of research on economic empowerment in Islamic boarding schools.

In this representation, terms highlighted in brighter yellow with larger node sizes indicate a higher frequency of occurrence in the literature. In contrast, terms in muted colors blend into the background and reflect comparatively limited scholarly attention. Overall, the visualization suggests that a substantial body of research has been developed around this topic, with several key themes emerging as dominant areas of inquiry. Methodologically, the

combination of these three visualizations allows for a more comprehensive analysis: network for structure, overlay for temporal dynamics, and density for theme intensity. This allows research trends not only to be identified but also understood in the context of their evolution and concentration.

Table 1. Research Trend Analysis on Islamic Boarding School Economic Empowerment

Period	Research Orientation (Sentiment)	Key Characteristics	Dominant Research Topics
2016–2018 (Early Phase)	Foundational and community-oriented	Research focused on the social role of Islamic boarding schools as agents of community development and social transformation—with an emphasis on collective empowerment and grassroots engagement.	Community empowerment, social capital strengthening, Indonesia context, boarding schools
2019–2021 (Development Phase)	Transitional and integrative	Increasing integration between the educational and economic functions of <i>pesantren</i> . Studies begin to explore institutional capacity, sustainability, and economic activities within Islamic education systems.	Sustainable development, sustainable empowerment, entrepreneurship, and small business, <i>pesantren</i>
2022–2023 (Expansion Phase)	Economic-oriented and institutional strengthening	Shift toward economic empowerment frameworks that highlight <i>pesantren</i> 's role in local and national economic systems. Emergence of Islamic economic concepts and value chains.	Economic empowerment, halal value chain, <i>santripreneur</i> , Islamic boarding school
2024–2026 (Recent/Advanced Phase)	Innovation-driven and capability-based	Strong emphasis on individual capacity building, entrepreneurial competencies, and future-oriented education models. Focus on cognitive and behavioral aspects of entrepreneurship among students (<i>santri</i>)	Entrepreneurial intention, entrepreneurial mindset, entrepreneurship education, entrepreneurship

Source: Authors' synthesis based on data retrieved from the Scopus database (2026)

Table 1 attempts to map the trends in bibliographic data-based research. The bibliometric evidence demonstrates a progressive evolution of research trajectories. Initially, studies were grounded in community empowerment and social development paradigms, positioning *pesantren* primarily as socio-cultural institutions. This finding is consistent with earlier studies that conceptualize *pesantren* as community-based institutions that strengthen social capital and improve local welfare through participatory empowerment approaches. Such a

perspective reflects the principles of Community Empowerment Theory, in which community participation, institutional capacity, and collective action serve as fundamental drivers of sustainable development.

Over time, the research focus shifted toward economic integration and institutional sustainability, reflecting the growing recognition of *pesantren* as economic actors rather than solely educational institutions. This transition corresponds with the implementation of productive economic activities through cooperatives, waqf-based enterprises, income-generating units (IGUs), and halal business ecosystems that strengthen institutional self-reliance (Fadhilah & Azmi, 2024; Fanani & Hakim, 2022; Kurniady et al., 2024). These findings also support Institutional Theory, which argues that organizations evolve in response to changing institutional environments, public policies, and stakeholder expectations. The increasing integration of economic functions demonstrates that *pesantren* are adapting to broader socio-economic demands while maintaining their educational and religious missions.

The most recent phase reveals a clear transition toward entrepreneurship-driven and human capital development, emphasizing innovation, entrepreneurial education, skills development, and individual agency. This finding aligns with the growing literature on *santripreneurship*, entrepreneurial mindset formation, and Islamic social entrepreneurship, which position entrepreneurship education as a strategic instrument for strengthening economic resilience and sustainable development (Anggadwita et al., 2021; Hamzah, 2026; Naimah et al., 2020; Yasmeen, 2026). From the perspective of Human Capital Theory, investment in entrepreneurial competencies and innovation enhances individuals' productive capacity and contributes to institutional competitiveness.

Consequently, *pesantren* are increasingly recognized as educational institutions capable of producing graduates with entrepreneurial competencies while simultaneously generating sustainable economic value. Overall, the bibliometric findings reveal a paradigmatic transformation from collective community empowerment toward entrepreneurial transformation and institutional innovation. This evolution indicates that *pesantren* are no longer viewed solely as religious educational institutions but also as strategic actors in developing sustainable economic ecosystems through business diversification, entrepreneurship, and innovation. Recent empirical studies further demonstrate that strengthening business diversification, income-generating units, and innovative revenue models substantially improves the financial sustainability and long-term educational resilience of *pesantren* (Hafidh et al., 2024; Hafidh et al., 2026; Sholahuddin, 2024).

These developments are consistent with the broader framework of sustainable development, which emphasizes integrating social, educational, and economic objectives to achieve long-term institutional resilience (Muiz et al., 2025). This study has several limitations. First, the bibliometric analysis was conducted exclusively using the Scopus database, which may not capture relevant publications indexed in other databases such as Web of Science, Dimensions, or Google Scholar. Second, the search strategy relied on predefined keywords, potentially excluding studies employing alternative terminology. Third, the analysis focused solely on English-language journal articles, thereby excluding other publication types and languages. Future research may incorporate multiple databases, broader search terms, and comparative bibliometric approaches to provide a more comprehensive understanding of research on the economic empowerment of Islamic boarding schools.

CONCLUSION

This study provides a comprehensive bibliometric analysis of research on economic empowerment in Islamic boarding schools (*pesantren*) using Scopus-indexed publications. The findings indicate that *pesantren* have undergone a significant transformation from traditional religious institutions into dynamic centers that integrate education, social development, and economic activities. The increasing volume of publications over time reflects a growing academic interest. It highlights the strategic importance of *pesantren* within contemporary development discourse, particularly for inclusive and sustainable economic growth. The temporal and thematic analyses reveal a clear evolution in research focus. Early studies were predominantly centered on community empowerment and social capital, positioning *pesantren* as grassroots agents of social transformation. This focus gradually expanded into a more integrative approach that combines education and economic functions, emphasizing sustainability and institutional capacity.

In recent years, the research trend has shifted toward entrepreneurship-oriented perspectives, with strong attention given to entrepreneurial mindset, intention, and education among *santri*, indicating an increasing emphasis on human capital development and innovation within Islamic educational institutions. Moreover, the network, cluster, and density visualizations confirm the multidimensional structure of this research field. Core concepts such as "*pesantren*" and "Islamic boarding school" serve as central nodes that connect various thematic areas, including entrepreneurship, sustainable development, economic empowerment, and Islamic values. While entrepreneurship and Islamic education emerge as dominant themes, emerging topics such as halal value chains and *santripreneurship* present opportunities for further exploration. Overall, the study concludes that the research trajectory is shifting toward innovation-driven and entrepreneurship-based frameworks, reinforcing *pesantren*'s role as key actors in fostering sustainable development and strengthening the Islamic economic ecosystem.

AUTHOR'S NOTE

The author declares that there is no conflict of interest related to the publication of this article. The author also confirms that the data and content of the article are free from plagiarism.

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