



Integrating Productive Waqf and Business Incubators: A Comparative Study of Indonesia and Thailand

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Abstract: Productive waqf has turned into a very effective and strategic method to achieve sustainable socioeconomic development. However, there remains a lack of integration between productive waqf and business incubators in Islamic boarding schools, limiting their development potential. This study aims to develop an integrated productive waqf–business incubator model. It adopts a comparative case study of Islamic boarding schools in Indonesia and Thailand. This study employed a qualitative approach. Data were collected through in-depth interviews, participant observation, focus group discussions, and document analysis with waqf *nazirs*, school leaders, student entrepreneurs, Islamic finance experts, and policymakers. The findings indicate that both countries recognize productive waqf as an effective mechanism for promoting entrepreneurship. However, significant differences exist in governance structures, institutional support, entrepreneurial culture, and partnerships with Islamic financial institutions. Islamic boarding schools in Indonesia demonstrate more effective business incubation practices and stronger governance. However, the potential benefits of greater community involvement are not yet fully supported by the existing regulatory framework. Based on these findings, the study proposes an integrated “Five Pillars” model. It comprises five key components: waqf governance, entrepreneurial education, business incubation, Islamic financial support, and multi-stakeholder collaboration. The integrated model is intended to strengthen the Islamic entrepreneurial ecosystem by enhancing entrepreneurial capacity and supporting entrepreneurial development. It also aims to maximize the socioeconomic impact of productive waqf.

Keywords: productive waqf, business incubator, Islamic entrepreneurship, Islamic boarding schools

Introduction

An entrepreneurial ecosystem is a systemic framework comprising interconnected actors, institutions, resources, and supporting conditions that collectively facilitate the creation, growth, and sustainability of new ventures (Malecki, 2018; Stam & Van De Ven, 2021; Wurth et al., 2023). The effectiveness of such an ecosystem depends on the interaction among financial capital, human resources, education, technology, institutional support, and collaborative networks (Huang et al., 2023; Zhuang & Liu, 2022). Empirical evidence indicates that business incubators play a strategic role in strengthening entrepreneurial ecosystems by providing mentoring, training, networking opportunities, and access to finance, thereby improving the survival and competitiveness of startups (Li et al., 2020; Ud Din et al., 2026).

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Within the Islamic economy, starting a business goes beyond a simple business venture or economic activity; it also entails striving for social justice, upholding ethical business practices, and contributing to community welfare through the principles of maqashid sharia (Salaheldeen & Azam, 2026). For this reason, fostering an Islamic entrepreneurial environment also means designing financial facilities that ensure sustainability without compromising Islamic values (Raimi et al., 2024, 2025). Islamic instruments of social finance, especially productive waqf, have an enormous opportunity to promote entrepreneurial activity by supplying the long-term capital needed for education, business formation, and the overall empowerment of the community (Ayub et al., 2024). In this way, productive waqf can be seen as a clever addition to the already existing entrepreneurial support systems (Iman & Mohammad, 2017).

Islamic boarding schools are gradually becoming community development centers and sources of entrepreneurship alongside the religious training (Anggadwita et al., 2021). In Indonesia, Islamic boarding schools have already launched economic initiatives such as cooperatives and business units, along with entrepreneurship education programs that students are likely to benefit from in their lives to become economically independent (Aziz & Mohamad, 2016). In Southern Thailand, Pondok institutions are the main source of Islamic education and also play an important role as community institutions that contribute to local socioeconomic development, even in a Muslim minority context (Hudaefi & Heryani, 2019). This kind of development has similarities, so both countries are very much appropriate places in which the productive waqf and business incubation combination can be studied (Mohsin et al., 2016).

The latest research findings clearly demonstrate that business incubation and entrepreneurship education at Islamic boarding schools help students develop entrepreneurial skills, innovation, and business readiness (Anggadwita et al., 2021). Still, a large number of such initiatives rely mainly on short-term funding (Durst & Gerstlberger, 2020). Besides this, they have little interaction with Islamic social finance instruments. Therefore, business incubators usually struggle to be financially self-sufficient, a major factor that hampers long-term entrepreneurial development (Liedtke, 2020).

Productive waqf, which is normally considered unproductive religious charitable giving, has become an economic tool in the hands of professionals that consistently delivers financial returns (Jafar et al., 2025). Several authors have found that productive waqf helps reduce poverty by financing education, supporting institutional sustainability, fostering community development, and economically empowering Muslims (Abubakar & Rahman, 2021; Ayub et al., 2024; Khan & Hassan, 2019). Most Indonesian Islamic boarding schools have found that they can support their educational activities and the running of their institutions through productive waqf income, in addition to small businesses (Rofiq et al., 2022). These boarding schools have become excellent examples of how, with a productive waqf, a business can have a stable financial base and sustain itself over a long period while developing business and entrepreneurial activities (Suyatno, 2023).

Despite this potential, the continued practice of waqf management faces substantial challenges (Mohammed Kabiru Musah et al., 2023). Previous studies have highlighted key issues, including ambiguity in waqf ownership and rights, the inability of the appointed Nazir to manage effectively, deficient governance, and limited cooperation with Islamic financial bodies (Ayub et al., 2025; Hadi et al., 2025; Kunhibava et al., 2024). In addition, a productive waqf is often seen as a separate charitable activity rather than as part of a comprehensive strategy for entrepreneurship development (Ayub et al., 2024; Iman & Mohammad, 2017; Jafar et al., 2025). This lack of integration significantly limits the waqf's potential to contribute to the sustained generation of economic value within Islamic educational institutions.

At first glance, Indonesia and Thailand appear quite different regarding the institutional framework supporting productive waqf development (Kahraman, 2021; Sulistyowati et al., 2022; Widiyanti et al., 2022). The situation in Indonesia is quite favorable with relatively comprehensive waqf regulations and a government-supported Indonesian Waqf Board (Nofianti et al., 2026). In addition, thousands of Islamic boarding schools manage large numbers of productive assets (Hasan & Yurista, 2025). Meanwhile, Thai Islamic boarding schools in Southern Thailand operate under more restrictive regulations but often exhibit greater community involvement and stronger local social networks (Yukhong et al., 2019). A juxtaposition of these two contexts reveals insights into how varying governance systems, institutional capacities, and stakeholders' working relationships determine the performance of waqf-based entrepreneurial initiatives (Hammar & Millstein, 2020; Kamaruzaman & Ishak, 2023).

Although previous studies have examined productive waqf, Islamic entrepreneurship, and business incubation separately, empirical research integrating these three dimensions remains limited. Existing literature has predominantly focused on productive waqf management (Suyatno, 2023), entrepreneurship education (Malecki, 2018), or business incubation (Ud Din et al., 2026) as independent topics, with little attention given to how productive waqf can serve as a sustainable financing mechanism for business incubators within Islamic boarding schools. Moreover, comparative evidence across different national contexts remains scarce, particularly between Muslim-majority and Muslim-minority countries.

The study focuses on a still-understudied research question: whether productive waqf integrated with business incubation can help strengthen Islamic boarding schools in Indonesia and Thailand. In this study, we use a comparative qualitative method to explore four aspects of institutional development and collaboration: governance models, entrepreneurial support mechanisms, stakeholders, and financing. By identifying and comparing successful case studies from Indonesia and Thailand, we aim to offer insights into how productive waqf can be integrated with business incubation to enhance the Islamic entrepreneurship ecosystem. Finally, the paper proposes a combined theoretical model that links productive waqf to business incubation, with the dual purpose of increasing institutional sustainability and entrepreneurial capacity.

This study contributes to the literature in three important ways. The primary novelty of this study lies in the development of an integrated productive waqf–business incubator model within an Islamic entrepreneurship ecosystem. First, it extends existing research by integrating productive waqf with business incubation within a unified Islamic entrepreneurship ecosystem. Second, it provides comparative evidence from Indonesia and Thailand, thereby enriching the understanding of waqf-based entrepreneurship under different institutional settings. Third, it proposes an integrated conceptual model that offers practical implications for waqf institutions, Islamic boarding schools, policymakers, and Islamic financial institutions seeking to strengthen sustainable entrepreneurship through productive waqf. The findings are expected to contribute to both the advancement of Islamic social finance literature and the development of more resilient entrepreneurial ecosystems in Islamic educational institutions.

Methods

This study used a qualitative comparative case study method to explore how productive waqf and business incubators have been implemented in Islamic boarding schools to support the growth of Islamic enterprises in Indonesia and Thailand. A qualitative study was chosen because it was through this method that we could discover the real situation, identify details of the various aspects of the implementation, and gather the views of relevant people (Hamilton & Finley, 2019). Using a comparative case study design (Do Amaral, 2022), the researchers could not only uncover common and distinctive aspects of the two countries but also create a comprehensive theory drawing on their respective experiences (Rofiq et al., 2022).

The research was conducted between January and June 2026 at Islamic boarding schools (*pesantren*) in North Sumatra, Indonesia, and Islamic boarding schools (*pondok*) in Southern Thailand. The Islamic boarding schools were selected using purposive sampling to ensure that each case provided rich and relevant information for the study. The selection criteria included: (1) the implementation of productive waqf programs; (2) active entrepreneurship or business incubation initiatives; (3) experience in managing waqf-based economic activities; (4) accessibility for fieldwork and data collection; and (5) the willingness of institutional leaders to participate in the research. These criteria enabled the study to compare institutions with relevant experience in developing productive waqf-based entrepreneurship in Indonesia and Thailand. The two regions represent different institutional contexts: Indonesia has a relatively well-established waqf governance system and a large network of Islamic boarding schools, whereas Islamic boarding schools in Southern Thailand operate within a Muslim minority setting characterized by strong community engagement and different regulatory arrangements. These contextual differences provide an appropriate basis for comparative analysis.

The study involved participants representing the main stakeholders responsible for managing productive waqf and entrepreneurship activities. Informants included Islamic boarding school leaders, *nazirs* managing productive waqf assets, managers of business units and business incubation programs, student entrepreneurs, Islamic finance practitioners, and academics specializing in waqf and Islamic entrepreneurship. Their diverse backgrounds enabled the researchers to gain comprehensive perspectives on

institutional governance, entrepreneurial development, financing mechanisms, and stakeholder collaboration. The number of informants was determined by data saturation, a process in which no further insights or themes emerged from additional interviews. This method guarantees that the collected data were sufficient to address the research objectives.

Data were collected using multiple qualitative techniques (Manojlovich et al., 2015) to ensure a comprehensive understanding of the research phenomenon. Semi-structured interviews served as the primary data source, allowing participants to explain their experiences, institutional strategies, challenges, and expectations regarding the integration of productive waqf and business incubation. Participant observation was conducted to examine the operation of business units, entrepreneurial activities undertaken by students, and productive waqf management practices within the Islamic boarding schools. In addition, document analysis was conducted by reviewing waqf financial reports, institutional regulations, the entrepreneurship curriculum, business development records, and other relevant policy documents.

The collected data were analyzed using thematic analysis (Clarke & Braun, 2017) following the interactive model (Miles et al., n.d.). The analysis began with data condensation through transcription, coding, and categorization of interview transcripts, observation notes, and institutional documents. Similar codes were grouped into broader themes related to waqf governance, entrepreneurship education, business incubation, institutional collaboration, and sustainability. Subsequently, the findings from Indonesia and Thailand were compared to identify recurring patterns, contextual differences, and complementary institutional practices. The final stage involved developing an integrated conceptual model illustrating how productive waqf and business incubators can jointly strengthen the Islamic entrepreneurship ecosystem.

To ensure the credibility and trustworthiness of the findings, triangulation was applied by comparing information obtained from interviews, observations, and documentary evidence (Campbell et al., 2020). Member checking was conducted with selected participants to confirm the accuracy of the researchers' interpretations. At the same time, peer discussions among the research team were undertaken to enhance analytical consistency and reduce researcher bias. Ethical principles were maintained throughout the study by obtaining informed consent from all participants, ensuring voluntary participation, protecting participants' anonymity, and using the collected information exclusively for academic and research purposes.

Results and Discussion

Comparative Role of Productive Waqf in Supporting Islamic Boarding School Entrepreneurship

The findings reveal that productive waqf plays a strategic role in supporting entrepreneurship within Islamic boarding schools in both Indonesia and Thailand. In both countries, waqf has evolved beyond its traditional function as a religious endowment into a productive economic instrument that supports educational sustainability and entrepreneurial activities (Ayub et al., 2024). Productive waqf finances business units, provides operational resources, and creates opportunities for students to acquire entrepreneurial experience while pursuing religious education (Suyatno, 2023). However, the institutional arrangements and governance mechanisms through which productive waqf is managed differ considerably between the two countries.

In Indonesia, productive waqf management benefits from a relatively comprehensive institutional and regulatory framework (Hadi et al., 2025). The implementation of Law No. 41 of 2004 on Waqf, supported by the Indonesian Waqf Board (BWI), provides legal certainty for waqf asset registration, management, and supervision. These regulations encourage Islamic boarding schools to develop productive waqf through commercial activities such as agriculture, retail businesses, cooperatives, and rental properties (Ayuniyyah et al., 2019). Consequently, productive waqf has become an increasingly reliable source of income that supports educational operations while creating opportunities for entrepreneurship among students (Abubakar & Rahman, 2021).

Interviews with administrators of Indonesian pesantren indicate that productive waqf enables institutions to reduce dependence on tuition fees and charitable donations. Income generated from waqf-based businesses is commonly reinvested into educational facilities, student scholarships, and entrepreneurial development programs. In several pesantren, productive waqf also provides seed funding for student business initiatives through Islamic cooperatives or revolving funds. These findings support previous studies

suggesting that professionally managed waqf contributes significantly to the financial sustainability of Islamic educational institutions and community economic development (Kamaruzaman & Ishak, 2023; Shulthoni et al., 2018).

By contrast, Islamic boarding schools (*pondok*) in Southern Thailand operate under substantially different institutional conditions. Since Thailand does not have a centralized waqf authority comparable to the Indonesian Waqf Board, waqf management is largely organized at the community level through mosque committees, religious foundations, and local Islamic leaders (Kahraman, 2021). The absence of a comprehensive regulatory framework limits opportunities for institutional expansion, yet it also allows greater flexibility in responding to local community needs.

Although formal governance structures are less developed, the findings indicate that social trust constitutes a major strength of productive waqf management in Southern Thailand. Community members actively participate in donating to, monitoring, and supporting waqf-funded activities because of the close relationships among religious leaders, donors, and beneficiaries (Hassama & Nor Asmat Ismail, 2023). Trust is reinforced through direct communication and shared religious values rather than through formal reporting systems. This community-based governance creates strong social legitimacy, enabling productive waqf initiatives to operate effectively despite limited institutional support.

The comparison demonstrates that the differences between Indonesia and Thailand are primarily shaped by their institutional environments. Indonesia's Muslim-majority context has facilitated the establishment of national regulations, dedicated waqf institutions, and broader access to Islamic financial services (Hassama & Nor Asmat Ismail, 2023; Laila et al., 2025). These factors strengthen governance, accountability, and asset development. Conversely, Islamic boarding schools in Southern Thailand operate within a Muslim-minority context where community solidarity and informal institutions compensate for the absence of comprehensive regulatory support (Yusuf & Thongin, 2025). These contextual differences influence how productive waqf contributes to entrepreneurship development (Maulina et al., 2026).

Despite these institutional differences, both countries share common objectives in utilizing productive waqf to promote economic self-reliance among Islamic boarding schools. In both contexts, waqf assets are increasingly viewed as productive capital capable of financing income-generating activities rather than merely supporting religious facilities. Administrators in both countries emphasized that entrepreneurial development is essential for preparing students to become economically independent while maintaining Islamic ethical values. This finding illustrates the expanding role of productive waqf in supporting broader socioeconomic development.

The study further reveals that several challenges remain common across both countries. Limited managerial capacity among *nazirs*, insufficient entrepreneurial knowledge, and weak collaboration with Islamic financial institutions continue to constrain the optimization of productive waqf (Rahmi Edriyanti et al., 2021). Although Indonesia possesses stronger regulatory support, several pesantren still struggle with professional asset management and business innovation. Likewise, Islamic boarding schools in Thailand face difficulties expanding productive waqf due to financial constraints and limited institutional recognition. These shared barriers suggest that governance reforms alone are insufficient without parallel investments in human capital and institutional capacity.

The comparative findings indicate that Indonesia and Thailand possess complementary strengths that could mutually enrich productive waqf development. Indonesia offers valuable experience in establishing formal governance systems, standardized reporting mechanisms, and institutional accountability through national waqf regulations. Meanwhile, Thailand demonstrates how strong community participation, local leadership, and social trust can sustain productive waqf initiatives even under limited regulatory conditions. Integrating these complementary strengths may contribute to a more resilient and socially embedded model of waqf governance (Rusydiana et al., 2025).

Overall, this comparative analysis confirms that productive waqf is a critical pillar of Islamic boarding school entrepreneurship in both Indonesia and Thailand, albeit through different institutional pathways (Maulina et al., 2026; Suyatno, 2023). Indonesia emphasizes formal governance and regulatory support, whereas Thailand relies more heavily on community participation and religious leadership (Buchenrieder et al., 2017). Rather than viewing these differences as competing approaches, the findings suggest that combining institutional governance with community-based social capital offers a stronger

foundation for strengthening entrepreneurship within Islamic boarding schools. Such integration provides the basis for the proposed productive waqf–business incubator model developed in this study.

Comparative Practices of Business Incubators in Indonesia and Thailand

The comparative findings indicate that business incubators play an increasingly important role in promoting entrepreneurship within Islamic boarding schools in both Indonesia and Thailand. Although both countries share the objective of preparing students to become economically independent entrepreneurs guided by Islamic values, their incubation practices differ considerably in organizational structure, institutional support, and operational mechanisms. These differences reflect the distinct educational systems, regulatory environments, and socioeconomic contexts in which Islamic boarding schools operate.

In Indonesia, business incubators are generally implemented through relatively formal institutional arrangements. Many pesantren have established business units, Islamic cooperatives (*koperasi pesantren*), entrepreneurship centers, and vocational training programs as integral components of their educational systems (Zaki et al., 2022). These institutions provide structured entrepreneurship education, business planning, financial management training, digital marketing, and mentoring programs for students. In several cases, incubator activities are incorporated into the pesantren curriculum, allowing students to acquire entrepreneurial competencies alongside their religious education (Anggadwita et al., 2021).

The presence of formal organizational structures enables Indonesian Islamic boarding schools to manage entrepreneurship programs more systematically. Business units function not only as learning laboratories but also as sustainable income-generating enterprises that finance educational activities. Furthermore, collaborations with universities, government agencies, and Islamic financial institutions expand students' access to training, technology, and financial resources. Such institutional support contributes to more structured entrepreneurial development and enhances the long-term sustainability of incubation programs (Rai et al., 2025).

Conversely, business incubation practices in Southern Thailand are generally more informal and community-oriented. Rather than operating dedicated business incubators, many Islamic boarding schools promote entrepreneurship through family-based enterprises, community businesses, and local economic activities. Students acquire entrepreneurial knowledge primarily through direct participation in family businesses, small-scale trading, agriculture, food production, and other community enterprises. Learning is largely experience-based and embedded within local social and religious networks.

One notable strength of the Thai model lies in its strong orientation toward community entrepreneurship. Local Muslim communities actively support students by providing practical business opportunities, informal mentoring, and market access through trusted social networks (Susomrith & Suseno, 2017). Family-owned microenterprises frequently serve as learning environments where students develop entrepreneurial skills while strengthening social responsibility and Islamic ethical values (Mohammed et al., 2025). This close interaction between Islamic boarding schools and surrounding communities fosters an entrepreneurial culture deeply rooted in local traditions and cooperation (Anggadwita et al., 2021).

The comparison demonstrates that each country possesses distinctive advantages. Indonesia offers stronger institutional capacity through formal governance, structured entrepreneurship training, dedicated business units, and broader access to external partnerships. These characteristics facilitate the systematic development of entrepreneurial skills and improve business scalability. In contrast, Thailand benefits from stronger social capital, community participation, and flexible entrepreneurial learning, which enable students to adapt quickly to local market conditions despite limited institutional resources (Pansuwong et al., 2023).

Nevertheless, both incubation models face important challenges. In Indonesia, entrepreneurship programs sometimes become overly dependent on institutional funding and administrative procedures, reducing flexibility and innovation (Kania et al., 2021). Meanwhile, the informal nature of business incubation in Thailand limits opportunities for business expansion, access to formal financing, and professional mentoring (Goncalves et al., 2026). In both countries, stronger collaboration with Islamic financial institutions, universities, government agencies, and private-sector partners remains essential to enhance the effectiveness and sustainability of business incubation initiatives.

Overall, the comparative analysis suggests that neither model is inherently superior; rather, they offer complementary strengths for the development of Islamic entrepreneurship. Indonesia demonstrates the

value of formal institutional support and structured entrepreneurship education, whereas Thailand highlights the importance of community engagement, experiential learning, and local business networks. Integrating these complementary practices could yield a more inclusive and sustainable business incubation model that strengthens entrepreneurial capacity within Islamic boarding schools and supports the broader Islamic entrepreneurship ecosystem (Napitupulu et al., 2026).

Integrating Productive Waqf and Business Incubators

The comparative findings demonstrate that integrating productive waqf with business incubators offers a promising strategy for strengthening the Islamic entrepreneurship ecosystem within Islamic boarding schools. Rather than functioning as separate institutional initiatives, productive waqf and business incubation can serve as complementary mechanisms that simultaneously address financial sustainability and the development of entrepreneurial capacity. Productive waqf provides long-term financial resources, while business incubators transform these resources into entrepreneurial opportunities through training, mentoring, innovation, and market access (Maulina et al., 2026; Mohd Thas Thaker et al., 2021). The comparison between Indonesia and Thailand further reveals that successful integration depends not only on financial resources but also on the quality of governance, institutional collaboration, and community participation.

Indonesia illustrates how a well-established governance system can support the integration process. The existence of a comprehensive legal framework for waqf, institutional oversight by the Indonesian Waqf Board (BWI), and standardized financial reporting practices creates a transparent and accountable environment for the management of productive waqf. These governance mechanisms enhance stakeholder confidence and enable Islamic boarding schools to allocate waqf resources more effectively to entrepreneurship programs (Himmawan et al., 2025). Formal institutional arrangements also facilitate collaboration with government agencies, universities, Islamic financial institutions, and other development partners, thereby strengthening the sustainability of business incubation initiatives.

In contrast, the experience of Southern Thailand demonstrates that strong community engagement can compensate for limited institutional regulation. Islamic boarding schools maintain close relationships with local Muslim communities, religious leaders, entrepreneurs, and family-owned businesses, creating an ecosystem characterized by mutual trust and collective responsibility. Community members actively contribute financial resources, mentoring, business experience, and market networks that support entrepreneurial activities among students (Rajchamaha & Prapojanasomboon, 2022). This socially embedded approach enables business incubation to develop organically through local collaboration rather than relying solely on formal institutional structures.

The comparative analysis suggests that the strengths of Indonesia and Thailand are complementary rather than competing. Indonesia contributes institutional governance through clear regulations, professional waqf management, accountability systems, and transparent financial reporting. These elements ensure that productive waqf assets are managed efficiently and sustainably. Thailand, on the other hand, contributes to strong community participation, collaborative local networks, an entrepreneurial culture, and social trust, which encourage the active involvement of multiple stakeholders in supporting student entrepreneurship. Combining these strengths creates a more balanced entrepreneurial ecosystem that integrates institutional effectiveness with social legitimacy.

Another important finding is that successful integration requires collaboration among multiple stakeholders beyond Islamic boarding schools themselves. Waqf institutions, Islamic financial institutions, universities, government agencies, local entrepreneurs, alums, and surrounding communities each perform complementary functions within the ecosystem. Waqf institutions provide sustainable financing, business incubators develop entrepreneurial competencies, universities contribute research and innovation, while communities and business networks facilitate market access and mentoring. The interaction among these actors strengthens both institutional resilience and entrepreneurial performance.

Based on the comparative findings, this study proposes an integrated productive waqf–business incubator model comprising five interconnected pillars: waqf governance, entrepreneurship education, business incubation, Islamic financial support, and multi-stakeholder collaboration. Waqf governance serves as the institutional foundation by ensuring transparency, accountability, and sustainable resource management (Ayub et al., 2024). Entrepreneurship education equips students with business knowledge and

Islamic ethical values, while business incubators provide practical training, mentoring, and support for innovation (Elbanna et al., 2025). Islamic financial institutions expand access to sharia-compliant financing, and multi-stakeholder collaboration connects Islamic boarding schools with governments, universities, industries, alums, and local communities to create a supportive entrepreneurial environment (Elayah, 2025).

The proposed model demonstrates that strengthening the Islamic entrepreneurship ecosystem requires integrating the institutional strengths observed in Indonesia with the community-based practices found in Thailand. Formal governance without active community participation may reduce institutional responsiveness, whereas strong community engagement without effective governance may limit long-term sustainability and scalability (Djarmiko et al., 2025). By combining these complementary approaches, Islamic boarding schools can establish a more resilient entrepreneurial ecosystem that enhances institutional sustainability, develops students' entrepreneurial capacity, and expands the socioeconomic impact of productive waqf in both Muslim-majority and Muslim-minority contexts.

Challenges in Indonesia and Thailand

The comparative findings reveal that although Indonesia and Thailand have made significant progress in utilizing productive waqf and business incubation to support entrepreneurship within Islamic boarding schools, both countries continue to face substantial institutional challenges. These challenges vary across their respective regulatory, social, and organizational contexts, yet collectively influence the effectiveness and sustainability of the proposed integration model. Understanding these differences is essential for designing policies and institutional strategies that are responsive to local conditions while maintaining the shared objective of strengthening the Islamic entrepreneurship ecosystem (Islam et al., 2025).

In Indonesia, one of the primary challenges concerns bureaucratic complexity and institutional governance. Although the country benefits from comprehensive waqf regulations and formal oversight by the Indonesian Waqf Board (BWI), administrative procedures related to waqf asset registration, certification, and institutional reporting are often perceived as time-consuming and complex. Several Islamic boarding schools reported that delays in the legalization of waqf assets limit their ability to develop productive business ventures and attract external investment. Consequently, regulatory strength does not always translate into operational efficiency.

Another challenge observed in Indonesia relates to the professionalism of *nazirs*. While productive waqf management has expanded considerably, many *nazirs* continue to rely on traditional management approaches with limited expertise in business planning, financial management, investment analysis, and risk management. As a result, productive waqf assets are frequently underutilized despite their considerable economic potential. The findings suggest that strengthening human resource capacity through continuous professional development is as important as improving regulatory frameworks.

In Southern Thailand, the challenges differ substantially. The absence of a comprehensive national regulatory framework for waqf limits institutional recognition and long-term planning for Islamic boarding schools. Most productive waqf initiatives depend heavily on local religious organizations and community contributions, making financial sustainability vulnerable to fluctuations in community support. Furthermore, operating within a Muslim-minority context restricts access to specialized Islamic financial institutions and public policy support that could otherwise facilitate entrepreneurship development.

Funding limitations also represent a significant obstacle in Thailand. Unlike many Indonesian pesantren that have access to diversified waqf assets and institutional partnerships, Islamic boarding schools in Southern Thailand generally rely on relatively small-scale community donations and family-based enterprises. This financial constraint limits opportunities to establish formal business incubators, expand entrepreneurial training, or invest in technology and business innovation. Consequently, entrepreneurial activities often remain small in scale despite strong community commitment.

Despite these contextual differences, several common barriers were identified across both countries. First, limited financial literacy continues to hinder the effective utilization of productive waqf (Akbar & Kassim, 2023). Many administrators, *nazirs*, and student entrepreneurs possess only basic knowledge of Islamic finance and lack the financial management competencies necessary to optimize waqf assets for

sustainable business development (Ayub et al., 2024). Improving financial literacy, therefore, represents a shared priority for strengthening waqf-based entrepreneurship (Mikail et al., 2024).

Second, inadequate business literacy and weak stakeholder collaboration remain persistent challenges in both Indonesia and Thailand (Suranto et al., 2025). Although entrepreneurship programs have been introduced in many Islamic boarding schools, systematic training in business planning, innovation management, digital marketing, and market expansion is still limited. Furthermore, collaboration among waqf institutions, universities, Islamic financial institutions, government agencies, and private-sector organizations is often fragmented, reducing opportunities for knowledge sharing, mentoring, and resource mobilization. Strengthening these partnerships is essential to creating an integrated entrepreneurial ecosystem that supports long-term business sustainability (Lobo et al., 2025).

Overall, the comparative analysis suggests that the challenges faced by Indonesia and Thailand are complementary rather than identical. Indonesia primarily requires improvements in institutional efficiency, professional governance, and regulatory implementation, whereas Thailand requires stronger regulatory recognition, diversified funding mechanisms, and broader institutional support. At the same time, both countries share a common need to improve financial and business literacy and to strengthen multi-stakeholder collaboration. Addressing these country-specific and shared challenges will be fundamental to successfully integrating productive waqf and business incubators as a sustainable model for developing Islamic entrepreneurship within Islamic boarding schools.

Proposed Integrated Productive Waqf–Business Incubator Model

The principal contribution of this study is the development of an integrated productive waqf–business incubator model derived from the comparative analysis of Islamic boarding schools in Indonesia and Southern Thailand. Rather than proposing a purely conceptual framework, the model is grounded in empirical findings that reveal complementary strengths between the two countries. Indonesia demonstrates relatively advanced institutional governance and regulatory support for productive waqf, whereas Thailand highlights the importance of community engagement, social trust, and local entrepreneurial networks. The integration of these complementary characteristics provides a more comprehensive framework for strengthening the Islamic entrepreneurship ecosystem within Islamic boarding schools (Mariyono, 2025).

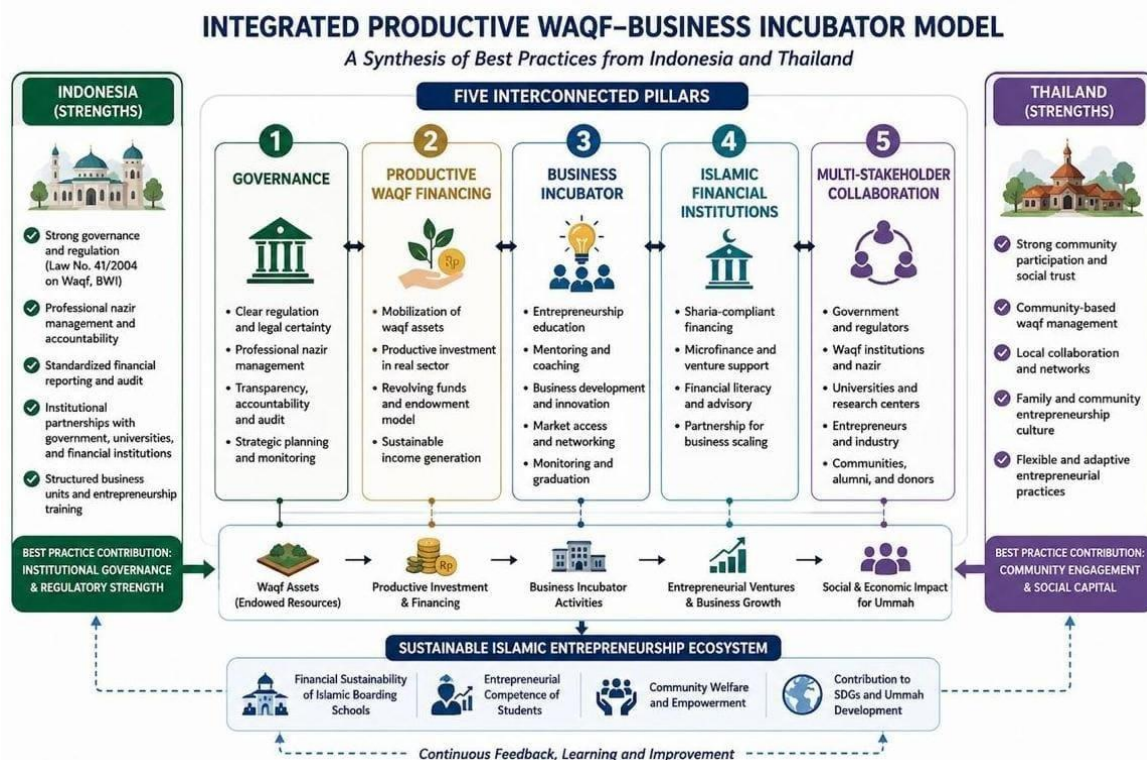


Figure 1. Integrated Productive Waqf–Business Incubator Model

Source: Research Findings, 2026

The proposed model consists of five interconnected pillars that collectively support sustainable entrepreneurial development. The first pillar, governance, serves as the institutional foundation for productive waqf management (Ayub et al., 2024). This pillar emphasizes transparent governance, professional *nazir* management, legal certainty of waqf assets, financial accountability, and strategic planning. The Indonesian experience illustrates that effective governance, supported by national regulations and standardized financial reporting, enhances institutional credibility, fosters stakeholder confidence, and encourages the productive use of waqf assets for entrepreneurial development.

The second and third pillars comprise productive waqf financing and business incubators. Productive waqf financing provides sustainable capital for entrepreneurial activities through endowment-based investment, revolving funds, and sharia-compliant financing mechanisms (Ekawaty et al., 2025). Meanwhile, business incubators transform these financial resources into entrepreneurial outcomes by providing entrepreneurship education, mentoring, innovation support, digital business training, and market development. The findings demonstrate that financial resources alone are insufficient without incubation programs that develop entrepreneurial competencies, just as incubation programs require sustainable funding to ensure their long-term continuity.

The fourth pillar emphasizes the strategic role of Islamic financial institutions in expanding the entrepreneurial ecosystem. Islamic banks, Islamic microfinance institutions, zakat organizations, and waqf institutions can provide complementary financial products, investment partnerships, financial literacy programs, and business advisory services (Pericoli, 2020). Strengthening collaboration with Islamic financial institutions enables Islamic boarding schools to diversify financing sources while ensuring that entrepreneurial activities remain aligned with sharia principles. This institutional linkage also enhances the scalability and sustainability of waqf-based enterprises beyond the boundaries of individual Islamic boarding schools.

The fifth pillar is multi-stakeholder collaboration, which emerged as one of the most important findings from the comparative analysis. While Indonesia demonstrates the effectiveness of institutional governance, Thailand illustrates how community participation, local collaboration, and social trust create resilient entrepreneurial ecosystems despite limited regulatory support. The proposed model, therefore, integrates government agencies, universities, Islamic financial institutions, local entrepreneurs, alums, religious leaders, and surrounding communities into a collaborative network. Such collaboration facilitates knowledge transfer, mentoring, market access, technological innovation, and resource mobilization, thereby strengthening both institutional capacity and entrepreneurial resilience (Pericoli, 2020).

The integrated model proposed in this study extends existing literature by positioning productive waqf not merely as a philanthropic funding instrument but as the financial foundation of an Islamic entrepreneurship ecosystem supported by business incubation and collaborative governance. The synthesis of Indonesia's strengths in governance, regulation, and financial accountability with Thailand's strengths in community participation, local collaboration, and entrepreneurial culture yields a novel framework applicable to both Muslim-majority and Muslim-minority contexts. Accordingly, this model offers theoretical contributions to the fields of Islamic social finance and entrepreneurial ecosystem research while providing practical guidance for policymakers, waqf institutions, and Islamic boarding schools seeking to establish sustainable entrepreneurship through productive waqf.

Conclusion

This study demonstrates that integrating productive waqf with business incubators offers a promising approach to strengthening the Islamic entrepreneurship ecosystem within Islamic boarding schools. The comparative analysis of Indonesia and Thailand reveals that productive waqf functions not only as a sustainable source of financing but also as an institutional mechanism that supports entrepreneurial development when combined with structured business incubation. While Indonesia benefits from stronger governance, regulatory support, and institutional accountability in managing productive waqf, Southern Thailand illustrates the importance of community participation, social trust, and local entrepreneurial networks in sustaining entrepreneurship initiatives. Rather than representing competing approaches, these

institutional characteristics complement one another and provide valuable insights for developing a more resilient model of Islamic entrepreneurship.

The primary contribution of this study is the development of an integrated productive waqf–business incubator model consisting of five interrelated pillars: governance, productive waqf financing, business incubators, Islamic financial institutions, and multi-stakeholder collaboration. Unlike previous studies that examined productive waqf, entrepreneurship education, or business incubation in isolation, this research demonstrates that sustainable entrepreneurial development requires the interplay among institutional governance, financial resources, entrepreneurial capacity building, and collaborative partnerships. By synthesizing best practices from Indonesia and Thailand, the proposed model extends the literature on Islamic social finance and entrepreneurial ecosystems while providing a comparative perspective applicable to both Muslim-majority and Muslim-minority contexts.

From a practical perspective, the findings suggest that Islamic boarding schools should move beyond viewing productive waqf solely as a charitable asset and instead position it as a strategic instrument for entrepreneurial development. Strengthening the professional capacity of *nazirs*, expanding entrepreneurship education, improving access to Islamic financial services, and fostering collaboration with universities, government agencies, industry, and local communities are essential for enhancing the sustainability of waqf-based enterprises. For policymakers, the study highlights the importance of developing supportive governance frameworks, strengthening institutional capacity, and encouraging cross-sector partnerships that facilitate the integration of productive waqf into national entrepreneurship development strategies.

Despite its contributions, this study has several limitations. The research was conducted using a qualitative comparative case study involving selected Islamic boarding schools in North Sumatra and Southern Thailand; therefore, the findings should not be generalized to all Islamic educational institutions. Furthermore, the study focuses primarily on institutional and managerial perspectives and does not quantitatively evaluate the economic performance or long-term impact of the proposed integration model. Future studies are encouraged to validate the proposed framework using quantitative approaches such as Structural Equation Modeling (SEM) or mixed-methods designs with larger samples across multiple countries. Comparative research involving other Muslim-majority and Muslim-minority contexts, as well as investigations into the role of digital waqf, Islamic fintech, and social impact measurement, would further enrich the understanding of productive waqf as a catalyst for sustainable Islamic entrepreneurship.

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