



Integrating Spiritual Values, Digital Transformation, and Legal Protection in *Pesantren*-Based Entrepreneurship: A TCCM-Based Systematic Review

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Article history: Received July 12, 2024 | Revised October 02, 2025 | Accepted October 30, 2025 | Available online on November 16, 2025

To cite this article [*Turabian of style 8th edition*]: Last name, First name, Second Author Name, and Third Author Name. "Integrating Spiritual Values, Digital Transformation, and Legal Protection in *Pesantren*-Based Entrepreneurship: A TCCM-Based Systematic Review". *IQTISHODUNA: Jurnal Ekonomi Islam* 14, no. 2 (October, 2025): 669-696. Accessed April x, 20xx.

ABSTRACT

In Indonesia, *pesantren* are evolving from being solely religious institutions to hybrid socio-economic institutions. These transformations stem from the assimilation of Islamic Digital entrepreneurial values and governance. However, the synergy of the facets in the candidate documents remains under-theorized and unchronicled. This research applies a Systematic Literature Review (SLR) methodology through the TCCM (Theory, Context, Characteristics, Methodology) Framework to weave together 78 peer-reviewed documents published between 2010 and 2025. The four key development pathways were distilled from bibliometric and content analyses and are as follows: the digitization of entrepreneurial waqf frameworks enhances operational efficiencies and scaling; waqf as a productive socio-economic capital; trust and moral legitimacy are obtained through Islamic business ethics; and the access to and the challenges of intellectual property are hindering institutional scale. This Study stands out in the body of available conceptual and analytical works, given that the majority of extant literature provides a striated holistic synthesis. In response, the research proposes a hybrid co-creation framework that integrates Islamic Digital entrepreneurship values and governance. This framework aims to foster socio-economic inclusivity through the collaboration of Digital MSMEs and *pesantren*. This work combines Islamic values of spirituality with the digital transformation and the protective legal system into a singular theoretical construct designed to reinforce entrepreneurship grounded in *pesantren* values, and it develops the theory by suggesting a hybrid co-creation model for its implementation.

Keywords: Islamic Entrepreneurship, *Pesantren*, Digital Transformation, Legal Protection

INTRODUCTION

In Indonesia, *pesantren* serve not just as religious educational institutions, but also as entrepreneurial centers for community economic empowerment

through micro, small, and medium enterprises (MSMEs). The entrepreneurial spirit emerges organically from the combination of *batiniyah* and *lahiriyah* values, with a focus on the Islamic work ethic.¹ Entrepreneurship in a *pesantren* setting reflects the institution's values by incorporating a purpose beyond mere profit; it embeds honesty, justice, and spiritual blessings into business practices.² The unique integration of these values is what distinguishes *pesantren* entrepreneurship from secular entrepreneurship. In this regard, the *pesantren* business model is unique and relevant, especially in the quest for economically empowering frameworks that are sustainably grounded and values-based.

The evolving socio-economic and technological landscape demands that *pesantren* adapt more rapidly to avoid being left behind in an increasingly competitive digital economy. Relying solely on conventional, community-based economic activities is no longer sufficient. *Pesantren* are now expected to engage with more complex digital entrepreneurship ecosystems. The emergence of innovative models such as e-farming marks this shift,³ digital platform-based marketing,⁴ and product-based waqf management, indicating that some *pesantren* are actively responding to this transformation.⁵ This development is supported by various studies affirming that digitalization and the management of productive waqf significantly contribute to expanding market reach, improving distribution efficiency, and increasing the added value of *pesantren*-based MSME products.⁶ In this context, the Leadership role within *pesantren* becomes highly central. *Kiai* and *Nyai*, with their charismatic, transformational, and multicultural Leadership styles, have proven capable of internalizing

¹ Ali Aslan Gümüşay, "Entrepreneurship from an Islamic Perspective," *Journal of Business Ethics* 130, no. 1 (2015): 199–208; Yusuf Sidani and Akram Al Ariss, "New Conceptual Foundations for Islamic Business Ethics: The Contributions of Abu-Hamid Al-Ghazali," *Journal of Business Ethics* 129, no. 4 (2015): 847–57.

² Grisna Anggadwita et al., "Empowering Islamic Boarding Schools by Applying the Humane Entrepreneurship Approach: The Case of Indonesia," *International Journal of Entrepreneurial Behavior & Research* 27, no. 6 (2021): 1580–1604; Irham Zaki et al., "Implementation of Islamic Entrepreneurial Culture in Islamic Boarding Schools," *International Journal of Innovation, Creativity and Change* 11, no. 11 (2020): 452 – 469, <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083043515&partnerID=40&md5=9a6a13d9ca867c26594c27b9a7e69a14>.

³ Yiwu Zeng et al., "E-Commerce in Agri-Food Sector: A Systematic Literature Review," *International Food and Agribusiness Management Review* 20, no. 4 (2017): 439–60.

⁴ S Mujiatun, B Trianto, and E F Cahyono, "The Impact of Marketing Communication and Islamic Financial Literacy on Islamic Financial Inclusion and MSMEs Performance: Evidence from Halal Tourism in Indonesia," *Sustainability (Switzerland)* 15, no. 13 (2023), <https://doi.org/10.3390/su15139868>.

⁵ Zaki et al., "Implementation of Islamic Entrepreneurial Culture in Islamic Boarding Schools"; Mohd Yusri bin Yusof, "Trust Fund: A Product Combining Waqf, Zakah and Şadaqah for Socio-Economic Agenda," *Journal of King Abdulaziz University: Islamic Economics* 27, no. 1 (2014).

⁶ Putra Pratama Saputra, Ryand Daddy Setyawan, and Muhammad Kurnia, "Analysis of the Effectiveness of the One Pesantren One Product (OPOP) Program in Supporting the Economic Empowerment of Islamic Boarding Schools in Belitung Regency," *Society* 11, no. 2 (2023): 543–56; Mujiatun, Trianto, and Cahyono, "The Impact of Marketing Communication and Islamic Financial Literacy on Islamic Financial Inclusion and MSMEs Performance: Evidence from Halal Tourism in Indonesia"; Marlya Fatira AKA and Anriza Witi Nasution, "Boosting The Welfare of Business Community: Implementing The Model of Islamic Micro Bank of Waqf In," *Economics* 4, no. 1 (2019).

religious values into an entrepreneurial vision that is responsive and adaptive to change.⁷

This growth phenomenon is still far from reaching its full potential. Significant structural barriers remain—chief among them is the weak legal protection system for *pesantren*-driven innovation and intellectual property. Products developed by *pesantren*-based MSMEs often lack intellectual property rights (IPR) protection, whether through trademarks, industrial designs, or other intellectual assets. Limited understanding, restricted access to information, and insufficient institutional capacity within *pesantren* to register and manage IPR have resulted in their innovative potential remaining undocumented and vulnerable to appropriation by other parties, without recognition or compensation. Consequently, business sustainability is threatened, and *pesantren* struggle to develop scalable, competitive business models. This reality underscores the urgent need for an integrative approach—one that not only supports digital transformation and the strengthening of spiritual values but also ensures legal protection as a foundational pillar for the sustainable growth of *pesantren*-based economic ventures.

Previous studies have emphasized the importance of integrating spiritual values and business ethics within the *pesantren* entrepreneurship ecosystem, while also highlighting the urgency of digitalization as a necessary adaptation to the modern economy. Other research has underscored the potential of productive waqf.⁸ Other research has also highlighted the potential of productive waqf and sharia-compliant *pesantren* enterprises as models of sustainable, sharia-compliant economic systems.⁹ However, there remains a research gap in comprehensively examining the interrelationship between *pesantren* values, digital transformation, and legal challenges—such as intellectual property rights (IPR)—in supporting the sustainability of *pesantren*-based MSMEs. Furthermore,

⁷ Muhammad Anas Maarif, Muhammad Husnur Rofiq, and Akhmad Sirojuddin, "Implementing Learning Strategies for Moderate Islamic Religious Education in Islamic Higher Education," *Jurnal Pendidikan Islam* 8, no. 1 (2022): 75–86; M Ali Haidar, Mizanul Hasanah, and Muhammad Anas Maarif, "Educational Challenges to Human Resource Development in Islamic Education Institutions," *Munaddhomah: Jurnal Manajemen Pendidikan Islam* 3, no. 4 (2022): 366–77.

⁸ Raditya Sukmana, Budi Trianto, and Annisa Masruri Zaimsyah, "Determinant Factor of Crowdfunders' Behavior in Using Crowdfunding Waqf Model in Indonesia: Two Competing Models," *Journal of Islamic Marketing* ahead-of-p, no. ahead-of-print (January 2022), <https://doi.org/10.1108/JIMA-08-2021-0246>; Helza Nova Lita and Zahera Mega Utama, "Legal Aspect for Managing Waqf Assets Through Company Management: Development of Share Waqf," *Hamdard Islamicus* 43 (2020): 58–63, <https://doi.org/10.57144/hi.v43iSpecialIssue.223>; Miftahul Huda, Aditya Prastian Supriyadi, and Ramadhita, "Productive Waqf Law Reform: A Solution to Support Indonesian Local Economy amid Contemporary Global Recession," *MILRev: Metro Islamic Law Review* 4, no. 1 (2025): 319 – 359, <https://doi.org/10.32332/milrev.v4i2.10210>; Moch Mahsun et al., "Green Waqf: Sustainable Surplus Perspective Balanced Scorecard Analysis," *KARSA Journal of Social and Islamic Culture* 30, no. 2 (December 2022): 266–97, <https://doi.org/10.19105/karsa.v30i2.8472>.

⁹ Irham Zaki et al., "Islamic Community-Based Business Cooperation and Sustainable Development Goals: A Case of Pesantren Community in Indonesia," *International Journal of Ethics and Systems* 38, no. 4 (2022): 621 – 632, <https://doi.org/10.1108/IJOES-12-2021-0218>; Nor Surilawana Sulaiman et al., *Unlocking the Potential of the Halal Industry in Brunei Darussalam: A SWOT Analysis and Sustainable Development Goals, The Halal Industry in Asia: Perspectives from Brunei Darussalam, Malaysia, Japan, Indonesia and China* (Springer Nature, 2025), https://doi.org/10.1007/978-981-96-0393-0_15.

few studies have explored the role of *pesantren* leadership in synergizing the spiritual, technological, and legal dimensions to develop community-based economic models.

This gap has driven a significant transformation in the phenomenon of *pesantren* entrepreneurship in Indonesia – from being merely a community-based socio-economic activity to evolving into a hybrid partnership model that involves external actors such as MSMEs, sharia cooperatives, and digital startups. Data from various studies indicate that over 42% of *pesantren* in Java and Madura,¹⁰ have developed business units integrated with digital marketing networks and sharia-based microfinance institutions. This model has fostered a co-creation ecosystem between *pesantren* and MSME actors, where spiritual values rooted in *pesantren* – such as trust, *barakah* (blessing), and ethical conduct – are combined with the managerial efficiency and digital technologies contributed by external partners.¹¹

Digital technology is an integral part of the Islamic entrepreneurial ecosystem developed within *pesantren*, emphasizing socio-religious values such as *ukhuwah* (brotherhood) and trust-based transactions. These elements strengthen the legitimacy of business practices in the eyes of the local community.¹² Meanwhile, other studies have found that the success of *pesantren* business models largely depends on their ability to negotiate with market logic without losing their spiritual roots.¹³ In this context, the hybrid model emerges as a new form of integration between faith-based social capital and economic innovation orientation.

Other studies reveal a growing trend among *pesantren* to diversify their businesses through collaboration with MSMEs in sectors such as agribusiness, halal culinary, and eco-tourism. These initiatives are managed using value co-creation principles and a community-based entrepreneurship approach. Such models have proven effective in enhancing value chain resilience and generating local economic spillovers, particularly when *pesantren* serve as social and moral incubators for the surrounding communities. This phenomenon has contributed

¹⁰ Ach Syafiq Fahmi et al., "Study of the History of the Birth of Pesantren in Madura: Perdikan Reform to Pesantren," *Kasyafa: Jurnal Pendidikan Agama Islam* 1, no. 2 (2024): 69–80.

¹¹ Nur Asnawi, Moch Mahsun, and Nevi Danila, "Industrial Halal Blockchain: The Great Potential of The Digital Economy in Indonesia," *IQTISHODUNA: Jurnal Ekonomi Islam* 12, no. 1 (2023); Siti Harizah et al., "New Direction for Green Economics Through The Development of Global Islamic Economics: A Bibliometric Analysis," *IQTISHODUNA: Jurnal Ekonomi Islam* 13, no. 1 (2024): 249–64, <https://doi.org/10.54471/iqtishoduna.v13i1.1879>.

¹² Ariful Islam et al., "Paradox of Sustainable Growth: The Interplay Between Small and Medium Enterprises and Non-Governmental Organizations and Government Helix," *Business Strategy and Development* 8, no. 1 (2025), <https://doi.org/10.1002/bsd2.70054>; Homero Rodríguez-Insuasti et al., "Creative Economy: A Worldwide Research in Business, Management and Accounting," *Sustainability (Switzerland)* 14, no. 23 (2022), <https://doi.org/10.3390/su142316010>.

¹³ Irada Sinta, Asmaul Husna, and Rico Nur Ilham, "Identification Of Production Costs In Tempe Ud Mawar Sari Agroindustry In Uteun Bayi Village Banda Sakti Sub-District Lhokseumawe City," *Jurnal Ekonomi* 12, no. 01 (2023): 1708–16.

to the rise of what is now being referred to as "*Pesantrenpreneur*,"¹⁴ which is emerging among the younger generation of santri, who are actively engaged in digital businesses through social commerce, halal e-marketplaces, and Islamic creative content.¹⁵ In this regard, *pesantren* are no longer merely centers for the transmission of religious knowledge, but have also become hubs for the production of economic and moral value, reinforcing one another. However, previous studies have highlighted a significant disparity between large, urban *pesantren* and smaller, rural ones. The main obstacles include limited access to technology, low levels of digital literacy, and the absence of legal protection mechanisms for innovations emerging from *pesantren*-based initiatives.¹⁶ This weak legal governance has resulted in many *pesantren* products lacking halal certification, intellectual property rights (IPR), or official distribution permits, which directly undermines the competitiveness of *pesantren*-based MSMEs.¹⁷

Thus, the phenomenon highlights an urgent need to formulate a hybrid co-creation model between *pesantren* and MSMEs—one that is not only economically driven but also strengthens legal protection, sharia governance, and digital transformation in an integrated manner. This approach is expected to bridge three key domains: values (Islamic ethics), technology (digital entrepreneurship), and law (legal protection), within a single framework of sustainable Islamic entrepreneurship that is adaptive to changing times.

Over the past decade, discourse on Islamic entrepreneurship has grown rapidly. The global economic paradigm has been shifting—from a purely capitalist system toward one grounded in sustainability and morality—positioning Islamic economic approaches more strategically within academic scholarship. In the Islamic perspective, entrepreneurship is not merely about profit-seeking, but rather a process of creating social and spiritual value, bridging worldly objectives with spiritual (*ukhrawi*) purpose.¹⁸ This explains why *pesantren* in Indonesia are increasingly seen not only as religious institutions, but also as socio-economic entities that play a crucial role in community empowerment.

¹⁴ Amin Ullah Khan and Yousaf Ali, "Sustainable Supplier Selection for the Cold Supply Chain (CSC) in the Context of a Developing Country," *Environment, Development and Sustainability* 23, no. 9 (2021): 13135 – 13164, <https://doi.org/10.1007/s10668-020-01203-0>; Zaki et al., "Implementation of Islamic Entrepreneurial Culture in Islamic Boarding Schools."

¹⁵ Muhammad Ramaditya et al., "Reinventing Talent Management: How to Maximize Performance in Higher Education," *Frontiers in Education* 7 (2022), <https://doi.org/10.3389/educ.2022.929697>; Rafiu Kunle Showole, Haruna Babatunde Jaiyeoba, and Ibrahim Adeniyi Abdur-Rauf, *Entrenching Green and Blue Economy Sustainability Through Halal Supply Chain Management, Green and Blue Economy Frameworks for Halal Industry Sustainability* (Springer Nature, 2025), https://doi.org/10.1007/978-981-96-1729-6_7.

¹⁶ Chee Kong Yap and Khalid Awadh Al-Mutairi, "Effective Microorganisms as Halal-Based Sources for Biofertilizer Production and Some Socio-Economic Insights: A Review," *Foods* 12, no. 8 (2023), <https://doi.org/10.3390/foods12081702>; Zamakhsyari Dhofier, "The Role of *Pesantren* in the Development of Primary Education in Indonesia," *Studia Islamika* 1, no. 2 (1994): 47 – 67, <https://doi.org/10.15408/sdi.v1i2.857>.

¹⁷ Amelia Fauzia et al., *Towards Action : Islamic Philanthropy for Social Justice in Indonesia*, 2022.

¹⁸ Gümüşay, "Entrepreneurship from an Islamic Perspective."

Pesantrens hold unique potential, as they combine spiritual values – such as sincerity (*ikhlas*), honesty, and social responsibility – with practical economic activities on the ground. Other studies have shown that such spiritual values help shape ethically oriented entrepreneurial character, positioning business not merely as a space for capital accumulation, but as a means of pursuing barakah (divine blessing)¹⁹. In this context, *pesantren* emerges as a concrete example of a values-based entrepreneurship model, where ethics and spirituality are not merely moral symbols but productive forces that drive the community's economic empowerment.

However, socio-economic dynamics and the advancement of digital technology have transformed the landscape of *pesantren*-based economies. *Pesantrens that once relied on conventional economic activities are now beginning to become active players in the digital ecosystem*. They are building digital marketplaces, developing sharia-compliant fintech-based management systems, and even managing product-based waqf with professional management models.²⁰ This transformation not only reflects the readiness of *pesantren* to embrace modernization but also signals the emergence of a new business model that integrates religious values, technological efficiency, and social sustainability goals.

Conceptually, this phenomenon can be understood through the lens of value co-creation. In this theory, economic value is not created unilaterally by producers but is jointly generated through interactions among various stakeholders.²¹ When this concept is adapted within an Islamic framework, it gives rise to the idea of Islamic value co-creation—a sharia-compliant collaboration among business actors, communities, and religious institutions aimed at creating collective Well-being (*maslahah*). Subsequent studies affirm that this approach effectively explains how spiritual values can be transformed into productive energy with tangible economic implications.²² In the *pesantren* context, co-creation occurs not only between producers and consumers but also between *pesantren* and MSME actors, in which each party contributes to the simultaneous creation of spiritual, social, and economic value.

¹⁹ Sidani and Al Ariss, "New Conceptual Foundations for Islamic Business Ethics: The Contributions of Abu-Hamid Al-Ghazali."

²⁰ Mujiatun, Trianto, and Cahyono, "The Impact of Marketing Communication and Islamic Financial Literacy on Islamic Financial Inclusion and MSMEs Performance: Evidence from Halal Tourism in Indonesia"; Saputra, Setyawan, and Kurnia, "Analysis of the Effectiveness of the One Pesantren One Product (OPOP) Program in Supporting the Economic Empowerment of Islamic Boarding Schools in Belitung Regency"; Mahsun et al., "Green Waqf: Sustainable Surplus Perspective Balanced Scorecard Analysis."

²¹ Coimbatore K Prahalad and Venkat Ramaswamy, "Co-Creation Experiences: The next Practice in Value Creation," *Journal of Interactive Marketing* 18, no. 3 (2004): 5–14.

²² Agung Arridho et al., "Digital Technology Adoption and Business Growth in Indonesian MSMEs Using PLS-SEM," in *Proceeding - 2025 4th International Conference on Creative Communication and Innovative Technology: Empowering Transformative MATURE LEADERSHIP: Harnessing Technological Advancement for Global Sustainability*, ICCIT 2025 (Institute of Electrical and Electronics Engineers Inc., 2025), <https://doi.org/10.1109/ICCIT65724.2025.11167198>.

Another relevant concept is hybrid entrepreneurship, which refers to the integration of market logic (profit-oriented) and social or spiritual logic (value-oriented) within a single organizational entity.²³ *Pesantren* serves as a concrete example of this hybrid organization. On one hand, they fulfill religious and educational functions; on the other, they establish business units, cooperatives, and partnerships with MSMEs to strengthen the local economy. This hybrid model illustrates how such an approach can yield a flexible, ethical business model with strong social legitimacy in the community's eyes.²⁴

Theoretically, research on *pesantren*-based entrepreneurship is grounded in three foundational pillars. The first is the theory of Islamic values, which holds that principles such as *tauhid* (divine oneness), *adl* (justice), *amanah* (trustworthiness), and *ihsan* (excellence) serve as moral guidelines for economic behavior.²⁵ The second is the entrepreneurial ecosystem theory, which emphasizes the importance of collaboration among various actors—including government, educational institutions, business communities, and financial entities—in creating a supportive environment for innovation.²⁶ The third is the theory of institutional hybridity,²⁷ which views organizations with dual value systems as entities that negotiate between two distinct logics—such as social and market—without losing their moral identity. Together, these three theories provide a comprehensive conceptual framework for understanding *pesantren* not only as social-religious institutions, but also as religiously grounded economic entities.

Meanwhile, empirical studies from the past five years have further reinforced the relevance of this model. Based on a synthesis of data from various research and empirical documents, four key development trends can be identified. First, the digitalization of *pesantren* entrepreneurship has proven effective in expanding market reach and improving operational efficiency.²⁸ Second, the management of productive waqf has become a vital source of socio-economic capital, strengthening the self-reliance of *pesantren*.²⁹ Third, the application of Islamic business ethics contributes to the development of trust

²³ Julie Battilana and Matthew Lee, "Advancing Research on Hybrid Organizing—Insights from the Study of Social Enterprises," *Academy of Management Annals* 8, no. 1 (2014): 397–441.

²⁴ Maarif, Rofiq, and Sirojuddin, "Implementing Learning Strategies for Moderate Islamic Religious Education in Islamic Higher Education."

²⁵ Rafia Afroz and Mohammed Niaz Morshed, "Factors Affecting the Intention of the Rice Farmers to Adopt the Integrated Cash Waqf Environmental Protection Model: An Empirical Study in Kedah Malaysia *," *MORSHED / Journal of Asian Finance, Economics and Business* 6, no. 4 (2019): 189–99, <https://doi.org/10.13106/jafeb.2019.vol6.no4.189>.

²⁶ Petra Isenberg et al., "Collaborative Visualization: Definition, Challenges, and Research Agenda," *Information Visualization* 10, no. 4 (2011): 310–26.

²⁷ Anne-Claire Pache and Filipe Santos, "Inside the Hybrid Organization: Selective Coupling as a Response to Competing Institutional Logics," *Academy of Management Journal* 56, no. 4 (2013): 972–1001.

²⁸ Mujiatun, Trianto, and Cahyono, "The Impact of Marketing Communication and Islamic Financial Literacy on Islamic Financial Inclusion and MSMEs Performance: Evidence from Halal Tourism in Indonesia."

²⁹ Zaki et al., "Implementation of Islamic Entrepreneurial Culture in Islamic Boarding Schools"; AKa and Nasutionb, "Boosting The Welfare of Business Community: Implementing The Model of Islamic Micro Bank of Waqf In."

capital and reinforces the moral image of *pesantren*.³⁰ Fourth, issues related to legal protection and intellectual property rights remain significant challenges that hinder the strengthening of *pesantren's* economic capacity.³¹

However, several fundamental limitations remain, presenting opportunities for new research. First, from a theoretical standpoint, most studies still position Islamic spiritual values merely as ethical or moral factors, rather than as strategic elements in the mechanism of economic value creation. In reality, the value co-creation approach offers a promising lens for understanding how religious values shape, in practice, participatory and sustainable financial systems. Second, in terms of context, the majority of previous studies have focused on Islamic universities or sharia-based corporations, rather than on *pesantren*, which, as religious educational institutions, possess charismatic Leadership and strong moral authority, making them uniquely positioned within the Islamic socio-economic landscape.³² Yet, the *pesantren* context provides a distinctive example of how spiritual Leadership embodied by *Kiai* and *Nyai* acts as a key driver of economic innovation.

Third, from an empirical standpoint, there is still a lack of research that directly examines the relationship between the integration of Islamic values, digital transformation, and legal protection and their impact on the economic performance of *pesantren*.³³ Most existing studies remain descriptive in nature and have yet to develop measurement models or quantitative indicators, such as a co-creation index or an Islamic entrepreneurial performance metric.³⁴ Fourth, from a methodological perspective, many previous studies remain limited to qualitative analyses of localized samples, lacking models that can explain causal relationships and synergistic effects within the *pesantren* entrepreneurship ecosystem.

This study contributes to the theory by developing and evaluating a customized entrepreneurial framework that integrates Islamic spiritual values, digital transformation, and legal protection to address a specific gap in the literature. The hybrid model of co-creation proposes a relationship-driven generation of economic, moral, and social values, and the integration of the overflowing values of the economic, social, and moral domains. The incorporation of this model into the community's economic development is significant for integrating informal economic practices and values-based systems at the grassroots level. This study contributes to the theory by hybrid-organizing

³⁰ Anggadwita et al., "Empowering Islamic Boarding Schools by Applying the Humane Entrepreneurship Approach: The Case of Indonesia."

³¹ Fauzia et al., *Towards Action : Islamic Philanthropy for Social Justice in Indonesia*.

³² Haidar, Hasanah, and Maarif, "Educational Challenges to Human Resource Development in Islamic Education Institutions."

³³ Mohammad Arif Agus Sugiono and Rahma Indrarini, "Kemandirian Dan Pemberdayaan Ekonomi Berbasis Pesantren (Studi Kasus Pada Pesantren Al-Amanah Junwangi Krian)," *Jurnal Ekonomika Dan Bisnis Islam* 4, no. 1 (2021): 88-98, <https://doi.org/10.26740/jekobi.v4n1.p88-98>.

³⁴ Aries Susanty et al., "Impact of Internal and External Factors on Halal Logistics Implementation," *Journal of Islamic Marketing* 13, no. 5 (2022): 1143 - 1170, <https://doi.org/10.1108/JIMA-09-2020-0293>.

and Islamic entrepreneurship to devise a model with the core elements of both to be centered on a particular concern of the Islamic scholarly community called *pesantren*, for which a bold vision is to be crafted to assume the economically active community, digitally integrated with accessible legal services, and connected to beds of high spiritual values. This study enhances and builds on the practical elements theory by providing a co-creation framework for policymakers, leaders of *pesantren*, and partners of MSME to Digital and to Intellectual Property Rights, integrated with *pesantren*'s economic development.

METHODS

This study employs a Systematic Literature Review (SLR) approach³⁵ To comprehensively examine the relationships among digital transformation, spiritual values, *pesantren* Leadership, and protection of intellectual property rights (IPR) within the *pesantren*-based entrepreneurship ecosystem. This approach was selected for its ability to provide both theoretical and practical synthesis of the scattered literature, while also identifying unexplored research gaps. The analysis process is guided by the TCCM framework (Theory, Context, Characteristics, and Methodology),³⁶ Ensuring the review is systematic, multidimensional, and aligned with the study's goal of developing a contextual conceptual model.

The literature search was conducted across three major Scopus-indexed databases, using a combination of keywords including: "*pesantren*," "*entrepreneurship*," "*digital transformation*," and "*intellectual property rights*." The search focused on publications from 2010 to 2025, in both English. Inclusion criteria covered articles discussing Islamic community-based entrepreneurship, digital transformation, Islamic values, Leadership, and legal protection. Non-scholarly works, purely theological studies, or normative articles lacking methodological grounding were excluded. Of the 322 articles identified, 78 met the eligibility criteria for in-depth analysis.

Data analysis was conducted manually and supported by R statistical software (version 4.3.1), explicitly using the bibliometrix and text mining packages to manage bibliographic metadata, visualize literature trends, and perform keyword and co-occurrence analysis.³⁷ Each article was then coded and classified according to the four TCCM dimensions: Theory (e.g., UTAUT2, TAM, Islamic ethics), Context (e.g., geographic locations and institutions like *pesantren*

³⁵ Alison Pearce et al., "Managing a Mega-Project to Explore and Enhance Careers: Insights from Global Entrepreneurial Talent Management 3," in *Handbook of Research Methods in Careers*, 2021, 73-102, <https://doi.org/10.4337/9781788976725.00011>; Justin Paul et al., "Scientific Procedures and Rationales for Systematic Literature Reviews (SPAR-4-SLR)," *International Journal of Consumer Studies* 45, no. 4 (2021): 01-16; Hannah Snyder, "Literature Review as a Research Methodology: An Overview and Guidelines," *Journal of Business Research* 104 (2019): 333-39, <https://doi.org/https://doi.org/10.1016/j.jbusres.2019.07.039>.

³⁶ Chandni Sharma and Shiksha Kushwah, "Mapping the Theory of Consumption Values: A Systematic Review Using the TCCM Approach," *Journal of Consumer Behaviour* 24, no. 2 (2025): 562-610.

³⁷ Adhita Sri Prabakusuma et al., "A Bibliometric Approach to Understanding the Recent Development of Self-Sufficient Fish Feed Production Utilizing Agri-Food Wastes and by-Products towards Sustainable Aquaculture," *Heliyon* 9, no. 7 (2023), <https://doi.org/10.1016/j.heliyon.2023.e17573>.

or sharia MSMEs), Characteristics (e.g., variables, key findings, contributions), and Methodology (e.g., research design and analytical techniques)³⁸. This mapping provided a deep understanding of trends and gaps in the literature. It served as a solid foundation for designing an integrative conceptual model to strengthen *pesantren*-based MSMEs in the digital era, anchored in value-based and legal frameworks.

RESULT

The SLR process yielded 78 relevant articles that met the inclusion criteria, covering publications from 2010 to 2025. Overall, the findings show that issues surrounding digital transformation, spiritual values, and *pesantren*-based entrepreneurship have attracted increasing academic attention over the past decade—particularly following the COVID-19 pandemic, which accelerated technology adoption across education and community-based economies. However, most of these approaches are still studied in isolation. The majority of research focuses on digitalization in *pesantren*, including the adoption of e-commerce platforms, e-farming systems, social media, and the integration of productive waqf models. In contrast, discussions surrounding the protection of intellectual property rights (IPR) in the context of *pesantren* MSMEs remain very limited and have not yet become a central focus in the existing literature.

A visualization of document production trends, generated using bibliometric tools, illustrates the year-by-year growth in research output (see Figure 1 below):

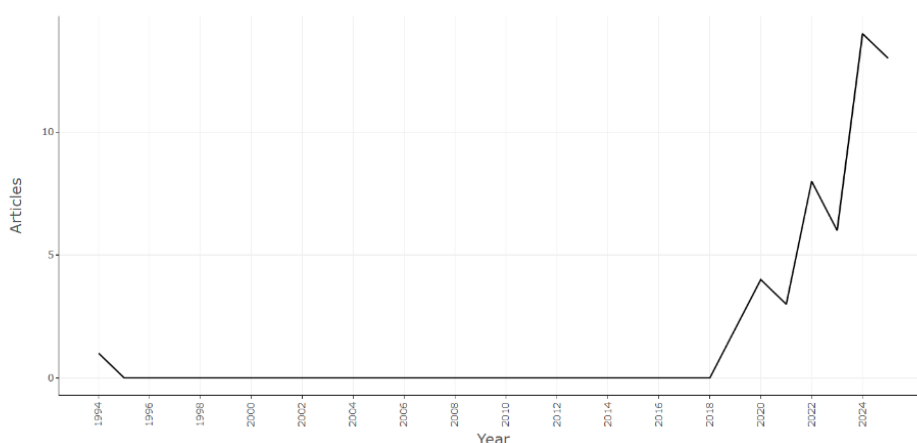


Figure 1: Annual scientific production (R-tool by authors)

The figure above illustrates the growth in publications on Islamic entrepreneurship and *pesantren*-based entrepreneurship over the past five years. A consistent upward trend is evident since 2020, with a significant surge between

³⁸ Nurhafizh Noor, "Technology Acceptance Model in Halal Industries: A Systematic Literature Review and Research Agenda," *Journal of Islamic Marketing* 15, no. 11 (2024): 3156 – 3173, <https://doi.org/10.1108/JIMA-02-2024-0077>; Lan Wang and Rick Cotton, "Revitalizing Colleague-Specific Human Capital: Boomerang and Pipeline-Based Hiring in a 41-Year Multilevel Study of Employee Mobility," *Human Resource Management* 64, no. 1 (2025): 137–55, <https://doi.org/10.1002/hrm.22255>.

2023 and 2025. This phenomenon reflects a growing academic interest in integrating Islamic values, digitalization, and legal innovation within the context of the *pesantren* economy. The sharp increase also indicates that this topic is becoming increasingly relevant and strategic in global discussions surrounding Islamic entrepreneurial ecosystems and hybrid value co-creation models.

Meanwhile, based on the author distribution chart presented in Figure 2, it is evident that publications on Islamic entrepreneurship and *pesantren*-based entrepreneurship are dominated by collaborations among researchers from various institutions across Southeast Asia, particularly Indonesia and Malaysia. This trend highlights a growing pattern of cross-institutional and cross-national collaboration in exploring themes such as digital transformation, productive waqf, and hybrid Islamic business models. The distribution pattern also reinforces the view that *pesantren* entrepreneurship is no longer a purely local issue, but has become part of the international academic discourse on Islamic economics and social innovation.

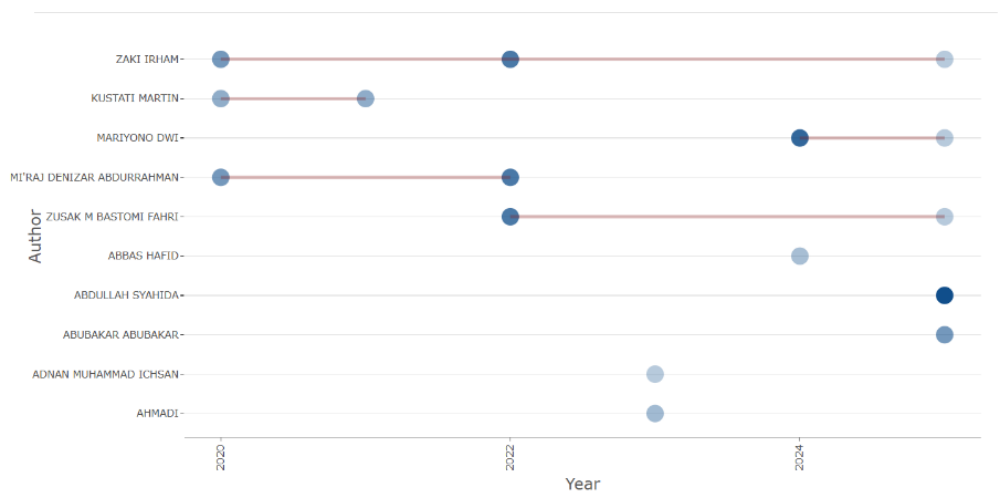


Figure 2 Author's production over time (Source: R-Tool by Authors)

Gambar ini memperlihatkan bahwa beberapa penulis seperti Kustati Martin, Mi'raj Denizar Abdurrahman, dan Zaki Irham mendominasi kontribusi ilmiah dengan H-index lokal tertinggi. Dari sisi institusi, universitas seperti Universitas Islam Bunga Bangsa Cirebon dan Universitas Negeri Malang tampil sebagai afiliasi paling produktif (Gambar 3), yang menegaskan konsentrasi riset pada institusi di Indonesia dan Malaysia, sebagaimana diperkuat oleh tren produksi institusi dari tahun ke tahun (Gambar 1).

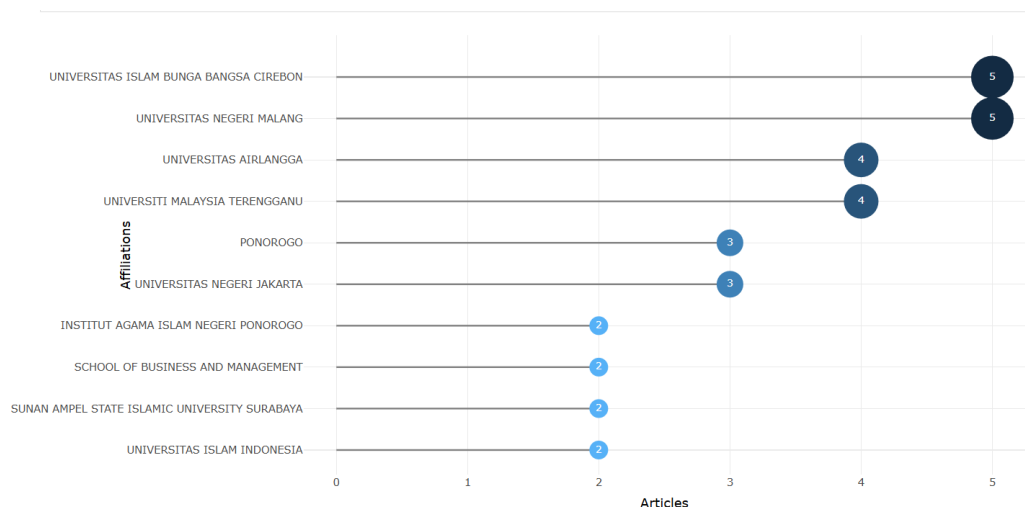


Figure 3. Most relevant affiliations (R-Tool by Author)

Theoretical, Contextual, Content, and Methodological Dimensions

From a theoretical perspective, approximately 40% of the articles refer to the *Technology Acceptance Model (TAM)* and *UTAUT2* frameworks to explain technology adoption behavior, both in educational settings and within Islamic community-based businesses. The remaining studies apply theories such as *Islamic Entrepreneurship Ethics* and the DeLone & McLean Information System Success Model, as well as conceptual approaches to *spiritual* and *transformational Leadership* in the *pesantren* context. However, there is no evidence of any study that explicitly integrates these various theoretical frameworks into a single, cohesive model. In terms of context, the majority of studies originate in Indonesia and Malaysia (over 65%), highlighting the relevance and institutional maturity of *pesantren* as research settings. Yet there remains a noticeable lack of contributions from other regions, such as South Asia, the Middle East, and Africa, despite comparable numbers of Islamic educational institutions in those areas.

From the content perspective, dominant topics include economic empowerment of *pesantren* through digitalization, social innovation grounded in Islamic values, and the role of *kiai* (religious leaders) in institutional management. However, only a handful of studies directly explore the relationship between value-based Leadership and digital performance in *pesantren*-run MSMEs. Furthermore, while some attention has been given to the importance of product branding and originality among *pesantren* MSMEs, there is still minimal focus on intellectual property rights (IPR) protection—both in terms of institutional awareness and regulatory implementation. Methodologically, most studies adopt qualitative descriptive approaches and case study designs. Quantitative methods using structural equation modeling (SEM) or mixed-methods approaches are still rarely employed. This signals a wide-open opportunity to develop empirical models that test integrative

relationships among spiritual values, digital adoption, and legal frameworks that support the long-term sustainability of the *pesantren* economy.

Co-occurrence Network Analysis

The co-occurrence network analysis reveals three main clusters that represent the current research focus areas within the domain of *pesantren*-based entrepreneurship. The first cluster, dominated by the keyword "*pesantren*", is closely linked to terms such as "*kiai*", "*radicalism*", and "*Islamic education*". This indicates that much of the existing literature continues to position *pesantren* within a traditional socio-religious framework, particularly in relation to Islamic education and counter-radicalism efforts. However, this approach largely overlooks the economic modernization and integration of digital technologies into *pesantren* institutional management. The second cluster reflects a shift in focus toward *entrepreneurial education*, with core terms like "*entrepreneurship education*", "*entrepreneurial mindset*", and "*entrepreneurial intention*". The emergence of these keywords signals a growing academic interest in enhancing economic capacity within Islamic educational settings. Nevertheless, the connection between the entrepreneurship cluster and *pesantren* remains relatively weak. This suggests that a systematic integration of spiritual values and entrepreneurship frameworks is still lacking—both theoretically and empirically—in the current body of research.

The third cluster illustrates attempts to globalize the concept, as seen through the use of the term "*Islamic boarding school*", which is frequently associated with "*Indonesia*". This pattern reflects an effort to make local narratives more accessible and relevant in international academic discussions. Indonesia emerges as a central node linking traditional and entrepreneurship-oriented clusters, underscoring its strategic role in the evolving literature on *pesantren*. Overall, these findings highlight the urgent need for an integrative theoretical framework that combines spiritual values, digital innovation, and legal protection in order to build a sustainable *pesantren* entrepreneurship ecosystem.

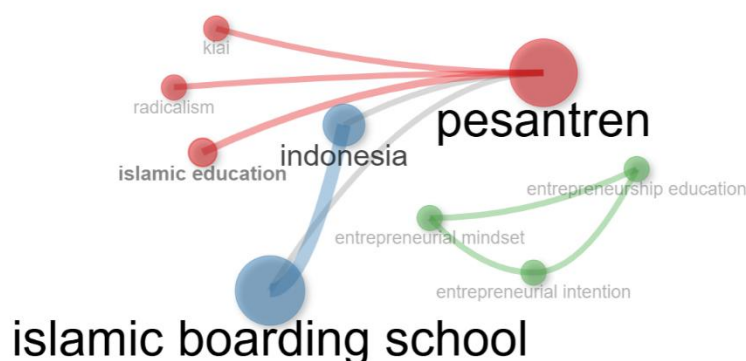


Figure 6. Co-occurrence Network

Thematic Maps

The thematic map generated from the bibliometric analysis presents the distribution of research topics across four thematic quadrants based on two key dimensions: density (level of development) and centrality (degree of connectivity).

In the Basic Themes quadrant (bottom-right), topics such as "*pesantren*", "*Islamic boarding school*", and "*Indonesia*" emerge as foundational elements that frequently appear in the literature. Although these topics are closely connected to other themes, they remain relatively underdeveloped—particularly in integrating technology, legal frameworks, and spiritual values in a comprehensive way. Their position on the map indicates that while *pesantren* serve as a central focus in the research landscape, their conceptual and methodological development still requires more systematic and in-depth approaches.

In contrast, the Motor Themes quadrant (top-right) includes topics such as "*productive waqf*", "*sustainable development*", and "*entrepreneurial education*", which demonstrate both high relevance and strong conceptual maturity. These themes represent rapidly growing research trends, aligning with the vision of a sharia-based economy that emphasizes both religious values and sustainability. *Productive waqf*, for example, has been increasingly discussed in relation to the economic empowerment of *pesantren* communities. However, the discussion has yet to be deeply integrated with formal legal structures, such as intellectual property rights (IPR). This opens up valuable opportunities for future research to connect these themes with the legal protection of intellectual assets within the *pesantren* ecosystem.

In the Niche Themes quadrant (top-left), topics like "*entrepreneurial intention*", "*entrepreneurial mindset*", and "*entrepreneurship education*" show high levels of theoretical development but remain weakly connected to the core themes. This indicates that while these studies possess conceptual depth, they have not yet been widely contextualized within the *pesantren* domain. Yet, integrating entrepreneurial orientation and mindset with *pesantren*-based education holds significant potential to develop a unique, value-driven model of Islamic entrepreneurship. Further exploration is therefore needed to bridge existing entrepreneurship theories—such as intention and attitude frameworks—with real-world practices in *pesantren* environments.

Meanwhile, the Emerging or Declining Themes quadrant (bottom-left) features underexplored topics like "digital literacy" and "independence". Although not yet part of the mainstream discourse, these themes are particularly relevant in the context of digital transformation among *pesantren*-based MSMEs. Strengthening digital literacy and fostering economic independence through technology are critical for enhancing the digital readiness of *pesantren* human resources. However, challenges such as low digital competence and uneven technological infrastructure remain prevalent. These issues call for greater academic attention, as further development of these themes could lay a crucial foundation for advancing inclusive and sustainable digital capabilities within the *pesantren* sector.

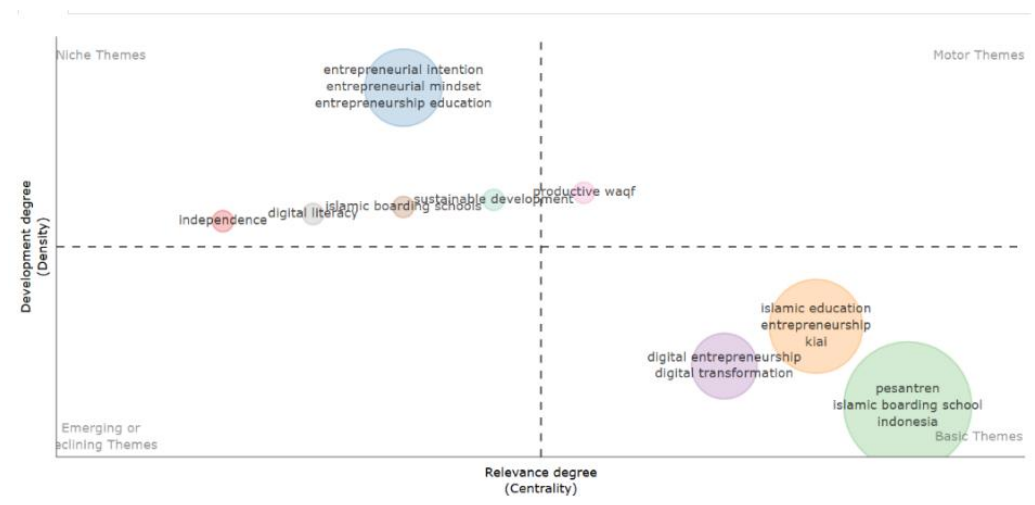


Figure 7: Thematic map

Conceptual Structure in Factorial Analysis

The visualization of the factorial analysis illustrates how key themes in *pesantren* research—particularly on entrepreneurship and digital transformation—are distributed across two main dimensions: *centrality* (Dim 1) and *density* (Dim 2). The results reveal that most themes are concentrated in the lower-left quadrant, including *education studies*, *business*, and *accounting and accountability*. These themes are central to the discourse, yet remain theoretically underdeveloped, signaling that the research in these areas is still largely exploratory and in need of stronger conceptual frameworks to evolve into more mature academic constructs.

Notably, the theme of *sustainable development* is central, highlighting its potential as a bridge between foundational and more advanced topics. In contrast, *business growth* is positioned on the far right, disconnected from other themes, indicating that while it is a distinct topic, it lacks integration with the broader *pesantren* research structure. This gap presents an opportunity to develop research models that connect business growth with Islamic values, digital transformation, and supporting legal and institutional frameworks within the *pesantren* ecosystem.

The *Annual Scientific Production* graph reflects significant shifts in scholarly activity. Before 2019, academic publications on this topic were almost stagnant. However, after the onset of the COVID-19 pandemic – especially from 2020 to 2025 – there has been a sharp increase in publications, signaling a growing awareness of the importance of Islamic values-based economic innovation. The year 2024 marked the peak in publication volume, showing heightened scientific attention and a shift in *pesantren*-related topics from normative discussions to more practical concerns in economics, technology, and entrepreneurship.

Despite the quantitative surge, structural analysis shows that thematic connectivity remains low. Many studies have yet to integrate spiritual, technological, and legal aspects in a cohesive framework. Themes such as *business growth*, *digital transformation*, and *sustainable development* carry strong social relevance but remain theoretically fragmented within the *pesantren* context. This highlights the urgent need for interdisciplinary, longitudinal research.

To address these gaps, it is necessary to consolidate theoretical frameworks by combining models such as UTAUT2, Islamic Entrepreneurship Ethics, and the Islamic Leadership Model into a single integrative framework. Furthermore, employing advanced technologies such as big data analytics and natural language processing (NLP) can enhance the analysis of primary data derived from *pesantren*-related documents. Future research is also encouraged to adopt longitudinal designs, allowing for a more comprehensive understanding of the long-term impacts of digital transformation policies within the *pesantren* sector. Expanding the research context beyond ASEAN, into regions like South Asia and Africa, would also enhance cross-cultural validation and increase the transferability of the proposed models.

To gain a well-structured and comprehensive understanding of the research landscape surrounding *pesantren*, digital transformation, and values-based entrepreneurship, a systematic mapping was conducted using the TCCM framework – Theory, Context, Characteristics, and Methodology. This approach was chosen for its effectiveness in identifying and categorizing theoretical contributions, contextual coverage, thematic focus, and methodological approaches in previous studies. As a result, the analysis serves not only to map existing trends but also to uncover research gaps that can inform the development of new conceptual models.

TCCM thus plays a critical role in building the conceptual foundation for this study, particularly given the complexity and intersection of spiritual values, digital technologies, and legal protections – an area that has yet to be thoroughly explored in an integrated manner. Additionally, this literature mapping provides clear direction for the scientific positioning of the research, both in terms of theoretical contribution and practical relevance. Therefore, the resulting categorization becomes a foundational step in designing a more comprehensive and contextually grounded model for *pesantren*-based economic empowerment.

Tabel 2 Kategorisasi SLR Berdasarkan TCCM Framework

Aspect (TCCM)	Sub-Dimension	Summary of Findings from SLR (2015–2025)	Research Gaps / Future Directions
T - Theory	Technology Acceptance Models (TAM / UTAUT2)	±40% of studies apply TAM or UTAUT2 to explain adoption of digital tools in Islamic education & business. Integration focuses on behavioural intention & perceived usefulness in the <i>pesantren</i> economy.	No integrative framework combining digital behaviour with spiritual-ethical values and legal mechanisms. Future work should hybridize UTAUT2 with Islamic ethics and Leadership.
	Islamic Entrepreneurship Ethics	Emphasizes tawhidic unity, justice, and social responsibility as moral foundations for entrepreneurship.	Still normative; limited empirical testing linking ethics with the performance of <i>pesantren</i> MSMEs.
	IS Success Model (DeLone & McLean)	Applied to evaluate system quality and user satisfaction in digital learning & e-commerce <i>pesantren</i> .	Rarely combined with spiritual or legal dimensions; lacks longitudinal validation.
C - Context	Spiritual & Transformational Leadership	Leadership of <i>Kiai</i> is framed as a value-based driver of institutional discipline and innovation.	No quantitative model linking Leadership value → digital performance of <i>pesantren</i> MSMEs.
	Geographic Focus	65 % of articles from Indonesia & Malaysia; <i>pesantren</i> identified as mature Islamic socio-economic institutions.	Lack of data from South Asia, the MENA region, and Africa → limited cross-cultural validation.
	Institutional Setting	<i>Pesantren</i> acts as a community-based incubator for entrepreneurship & digital learning.	Weak policy support and fragmented collaboration with MSMEs.
C - Characteristics	Thematic Orientation	Shift from religious-normative studies to economic-technological empowerment post-2020 (COVID-19).	Need to integrate <i>spiritual-digital-legal</i> dimensions into a single ecosystem model.
	Dominant Topics	Digitalisation of <i>pesantren</i> economy; Islamic social innovation; <i>kiai</i> Leadership; branding of MSMEs.	Few studies connect value-based Leadership with MSME digital performance or HAKI protection.

	Value Orientation	Faith-based ethos: <i>amanah, barakah, ukhuwah, maslahah</i> as guiding values for business.	Needs operationalisation into measurable indicators for sustainable entrepreneurship.
	Legal Awareness & Protection (HAKI)	Minimal discussion on intellectual property protection for <i>pesantren</i> products.	Urgent to integrate legal governance & IP awareness into <i>pesantren</i> business models.
	Innovation & Technology	Digital literacy and e-commerce emerge but remain uneven due to infrastructure & human-capital gaps.	Future research: develop a digital readiness index for <i>pesantren</i> institutions.
M - Methodology	Qualitative Descriptive & Case Study	Dominant approach; explores phenomena through interviews & observations in <i>pesantren</i> contexts.	Over-reliance on descriptive methods; limited generalisation.
	Quantitative (SEM/PLS)	Rarely used; only a few structural models examining the interaction of values, Leadership, & digitalisation.	Encourage advanced modelling (SEM, PLS, hybrid MCDM) to build predictive frameworks.
	Mixed-Methods & Longitudinal Design	Very scarce; mostly cross-sectional.	Need longitudinal and cross-cultural comparisons to assess sustainability impact.
	Use of Digital Tools (Bibliometrics, NLP, Big Data)	Bibliometric analysis emerging post-2020 helps map research clusters.	Future studies should employ NLP & AI-based analytics on <i>pesantren</i> digital archives.

The TCCM analysis of 78 articles shows that the information technology approach remains prominent in *pesantren* (Islamic boarding schools), digital entrepreneurship, and legal protection. Theoretically, more than half the studies are based on technology-driven models, most notably UTAUT/UTAUT2, TAM, and the DeLone & McLean framework. This indicates a considerable concentration of literature on technology adoption, particularly emanating from the shifted paradigms of online education and technology integration after the pandemic. Yet there is a relative void on Islamic values, sharia entrepreneurial ethics, and spiritual Leadership, as these areas tend to be peripheral rather than central. Without a doubt, the literature lacks a robust conceptual framework that integrates technology, religion, and legal principles. Hence, the theoretical proposition pertains to extending hybrid organizing and Islamic entrepreneurship through the moral-spiritual capital and legal governance of

pesantren within a digital entrepreneurial context, most likely to give rise to the theory referred to as the "Islamic Value-Based Hybrid Digital Ecosystem."

Given informative context, the majority of works rest with Indonesia and Malaysia. This indicates considerable advancement in *pesantren* ecosystems across the countries, making them enriched environments for scholarship. While there are Islamic educational institutions and *pesantren*-type institutions in South Asia, the Middle East, and Africa, the global or cross-cultural contexts remain underdeveloped. The disparity in research focus implies it will be more comprehensive, and the findings could be cross-validated in untested regions. The limited scope also affects the latitude for pluralism in the methodologies employed, specifically in the cultural, institutional, and regulatory aspects of IPR. Therefore, subsequent research programs should incorporate more cross-country and comparative studies to ascertain the adaptability of the models of entrepreneurship based on *pesantren* in diverse plural socio-legal contexts.

Among the various research themes, studies concerning digital transformation, particularly the domains of learning management systems (LMS), e-commerce, and social media, are the most prevalent. Research on spiritual values and productive waqf (Islamic endowment) is still in its infancy and remains largely fragmented. The legal protection for MSME innovations derived from *pesantren* is, analytically as well as in terms of volume, extremely shallow, especially regarding IPR. Only 2 (3%) of the articles integrate all three elements – values, digital, and legal – together in a single research endeavor. This demonstrates the importance of this research in developing an integrative model that can transcend the normative, digital, and legal interstices in an entrepreneurial ecosystem of *pesantren*. Therefore, the research focus should be to quantify the spiritual and technological elements and legal principles to test their interactions in enhancing the performance of MSMEs in the *Pesantren*.

So far, research remains primarily methodological, descriptive, qualitative, and case study, demonstrating that most research is still exploratory and narrative in character. Few studies use quantitative approaches that incorporate structural equation modeling (SEM), partial least squares (PLS), or mixed methods. The absence of evaluative or predictive frameworks constrains the research's empirical sufficiency in exploring critical variable relationships – e.g., technology adoption, value reinforcement, and awareness of the law. Therefore, the methodological agenda for the future should apply more robust predictive modeling, tiered quantitative frameworks, and longitudinal studies assessing the enduring value of digital and legal interventions within the complex, dynamic context of *pesantren*.

In conclusion, the TCCM analysis points to a crucial scholarly gap in the intersection of spirituality, digital economy, and legal protection vis-à-vis the empowerment of the *pesantren* economy. The need, therefore, is to devise a more relational conceptual framework that, while aligned with the present challenges, is also anchored in the local context. Hence, the study puts forward the development of the *Pesantren* Hybrid Co-Creation Model as a theoretical pathway and action plan to strengthen.

DISCUSSION

Integrating Spirituality, Digitalization, and Legal Protection in the *Pesantren* Entrepreneurial Ecosystem

Spirituality as Ethical Capital and Institutional Logic

The spiritual foundation of *pesantren* entrepreneurship goes beyond a set of moral imperatives; it represents a deeply embedded *institutional logic* that shapes economic behavior, social relationships, and legitimacy within Islamic society – rooted in *tawhidic ontology*, spirituality in *pesantren* forms the epistemic nucleus of what calls the "God-conscious entrepreneurial self," where commerce is not only an act of trade but a manifestation of devotion (*ibadah*).³⁹ Within this normative framework, *amanah* (trustworthiness), *barakah* (blessing), *'adl* (justice), and *maslahah* (public benefit) operate as guiding principles for economic conduct. Unlike secular entrepreneurship, which derives legitimacy from innovation and performance, *pesantren*-based entrepreneurship derives legitimacy from *trust capital*. This moral asset, accumulated through ethical behavior and collective trust, becomes a unique form of *social currency* that sustains loyalty and long-term community relationships. Yet existing research, such as that by Sidani and Al Ariss, often isolates spirituality from economic rationality, treating it as a normative backdrop rather than a measurable determinant of business success. The critical challenge is operationalizing spirituality as an *empirical variable* that bridges ethical intent and financial performance.⁴⁰

Spirituality should be perceived not merely as personal piety but as *organizational spirituality*—a collective epistemology guiding production, distribution, and innovation within Islamic values. This transforms *pesantren* into a moral economy, blending theological imperatives with practical market behavior. The implication is profound: spirituality serves not as a control mechanism but as an *independent driver* of sustainable entrepreneurship. Future research must translate abstract ethical constructs, such as *barakah*, into measurable indicators, including customer loyalty, ethical branding, and perceived Leadership integrity. Critically, spirituality also imposes boundaries. It legitimizes entrepreneurship as a religious obligation but restricts it within divine ethics. The dual pursuit of *profit and piety* situates *pesantren* as a hybrid institution that negotiates between capitalist logic and divine accountability. Thus, spirituality is both enabling and constraining, an arena of *ethical dialectics* where business actions are constantly evaluated against theological meaning.

Digitalization as Structural and Ethical Transformation

Digitalization redefines the structure of *pesantren* entrepreneurship by merging traditional Islamic values with the logic of technology. Beyond its

³⁹ Gümüşay, "Entrepreneurship from an Islamic Perspective."

⁴⁰ Sidani and Al Ariss, "New Conceptual Foundations for Islamic Business Ethics: The Contributions of Abu-Hamid Al-Ghazali."

instrumental role, digitalization reshapes how *pesantren* create value, communicate, and compete in the modern economy. However, existing frameworks—such as TAM and UTAUT2,⁴¹ Assume value neutrality, ignoring how religious ethics mediate technology adoption. In *pesantren*, digital innovation is filtered through *syariah compliance* and *religious legitimacy*, not merely efficiency or profitability.

The UTAUT2-Islamic Value Extension Model proposed here extends the theory by introducing constructs such as Compatibility with Islamic Values, Perceived Religious Legitimacy, and Digital-Trust Capital. These constructs recognize that digital tools are not neutral instruments but carriers of moral meaning. *Kiai* and *Nyai* serve as moral gatekeepers, determining whether technologies align with Islamic principles. Adoption becomes a *value-filtered process* rather than a utilitarian calculation. Yet, this digital transformation introduces ethical tensions. While technology democratizes market access, it also risks eroding sincerity (*ikhlas*) and replacing moral depth with algorithmic visibility—a phenomenon that can be termed *algorithmic utilitarianism*. Notion of *system colonization* is relevant here: market algorithms can infiltrate the *lifeworld* of *pesantren*, subordinating communicative ethics to data-driven imperatives.⁴²

A critical strategy is to foster an *ethical digital ecosystem* that transforms technology from a source of ethical risk into an instrument of empowerment. This involves integrating digital literacy with *spiritual literacy*, ensuring that *pesantren* actors maintain agency over technological tools rather than becoming passive users. Moreover, Leadership models must evolve into *spiritual-digital governance*, where ethical vision and digital competence coalesce. Ultimately, digitalization is not simply modernization but *moral mediation*. It reconfigures hierarchies, alters power dynamics, and demands a new ethical vocabulary where innovation is tempered by faith. When framed within *maslahah* (social benefit), digital entrepreneurship in *pesantren* can transcend transactional capitalism and evolve into *ethical digitalism*—a synthesis of faith, technology, and justice.

Legal Protection and HAKI Literacy as Foundations of Sustainability

The legal dimension is perhaps the most overlooked yet crucial component of *pesantren*-based entrepreneurship. Despite rapid business growth, legal consciousness—especially regarding *Hak Kekayaan Intelektual* (HAKI)—remains low. This neglect exposes *pesantren* entrepreneurs to imitation, exploitation, and systemic exclusion from formal markets. Within Islamic jurisprudence, however, *hifdz al-mal* (protection of wealth) is a divine mandate that links property rights to moral responsibility.⁴³ Lack of legal awareness generates *regulatory asymmetry* between *pesantren*-based SMEs and mainstream

⁴¹ Cristiana Abbafati et al., “Global Burden of 369 Diseases and Injuries in 204 Countries and Territories, 1990–2019: A Systematic Analysis for the Global Burden of Disease Study 2019,” *The Lancet* 396, no. 10258 (2020): 1204–1222, [https://doi.org/10.1016/S0140-6736\(20\)30925-9](https://doi.org/10.1016/S0140-6736(20)30925-9).

⁴² Pietro Alfano et al., “Image and Culture in the Care of Unaccompanied Minor Refugees,” *Evolution Psychiatrique* 83, no. 4 (2018): 557–78, <https://doi.org/10.1016/j.evopsy.2018.04.008>.

⁴³ Fauzia et al., *Towards Action : Islamic Philanthropy for Social Justice in Indonesia*.

corporations. This asymmetry undermines fairness, legitimacy, and access to global halal markets. From the lens of *critical legal pluralism*, *pesantren* operate within three overlapping legal orders: Islamic law, state law, and local custom. Effective entrepreneurship thus requires not only compliance but negotiation across these domains.

Critically, neglecting legal frameworks contradicts *pesantren*'s own ethical doctrines of *'adl* (justice) and *amanah* (trust). Protecting intellectual property is not merely an economic right but a moral obligation to ensure distributive justice and reward ethical innovation. Consequently, HAKI education should be embedded in *pesantren* curricula as part of *moral literacy*, transforming compliance into an act of worship and social accountability.

Government policy often prioritizes digitalization training while overlooking legal literacy. Such an imbalance results in rapid production without protection. A *Pesantren Legal Literacy Framework* should thus integrate:

1. Simplified legal education contextualized within Islamic ethics,
2. Partnerships with legal aid and intellectual property agencies, and
3. Community-based legal mentoring.

This triadic model aligns legal protection with religious obligation, creating what can be termed a *moralized legal economy*. Comparative insights from Malaysia and Pakistan show the efficacy of hybrid models that combine Sharia certification with formal IPR systems. Adopting such pluralistic legal mechanisms can safeguard *pesantren* entrepreneurship from exploitation while ensuring it remains ethically grounded.

Toward an Ethical Digital Islamism Framework

Integrating spirituality, digitalization, and legal protection reveals a multi-logic hybrid system—a fusion of faith, innovation, and justice. Spirituality anchors moral coherence; digitalization catalyzes transformation; and legal protection ensures continuity. Together, they constitute a new paradigm: Ethical Digital Islamism, an epistemic framework where moral values, technological capability, and institutional legitimacy converge. This model extends the theory of *hybrid organizing*,⁴⁴ showing how *pesantren* balance divine ethics with market imperatives through *selective coupling* rather than compromise. Unlike secular social enterprises that balance profit and purpose, *pesantren* entrepreneurship integrates *piety*, *performance*, and *protection* into a single moral system. Such synthesis contributes to global debates on *ethical capitalism* and *Islamic economics*. It demonstrates how Southern epistemologies—rooted in local faith traditions—can enrich contemporary theories of responsible business, sustainability, and digital transformation. By reframing entrepreneurship as *ethical co-creation*, *pesantren* are not merely adapting to modernity; they are redefining it.

⁴⁴ Pache and Santos, "Inside the Hybrid Organization: Selective Coupling as a Response to Competing Institutional Logics."

CONCLUSION

This study offers a comprehensive synthesis of the growing body of literature on *pesantren*-based entrepreneurship, highlighting the evolving role of *pesantren* as hybrid institutions that integrate Islamic spiritual values, digital innovation, and legal frameworks. Using a Systematic Literature Review (SLR) guided by the TCCM framework, the research identified significant developments in the digitalization of *pesantren* entrepreneurship, the emergence of productive waqf as socio-economic capital, the role of Islamic ethics in building trust capital, and the persistent challenges in legal protection and intellectual property rights. Despite increased scholarly interest in the wake of the COVID-19 pandemic, the findings reveal that most studies remain fragmented – focusing on individual components such as technology or values – while overlooking their synergistic potential. There is a lack of integrative models that holistically connect spiritual, technological, and legal dimensions within the *pesantren* economy. To address this gap, the study proposes a hybrid co-creation model that positions *pesantren* not only as centers of religious education but also as dynamic agents in inclusive and value-driven economic development. The model underscores the importance of collaborative engagement between *pesantren* and MSMEs in fostering ethical entrepreneurship, sustainable growth, and institutional resilience. By framing Islamic values as strategic drivers rather than mere moral references, this study lays the groundwork for future empirical validation. It offers practical insights for policymakers and stakeholders seeking to strengthen the Islamic entrepreneurial ecosystem.

Author's Contribution

Muhammad Anas: Contribute to formulating research ideas, collecting data, processing data, and interpreting data.

Umratul Khasanah: Contributing to writing systematics, research methods, and analyzing interpretation results.

Nur Asnawi: Contribute to language proofreading.

Acknowledgements

The author is grateful to those who helped complete this article, especially during the data collection and article review.

Declaration of Competing Interest

The author declares that there is no conflict of interest.

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