

Digital Business Sustainability: Integration of Technological Innovation and Sharia Economic Ethics

Emilta Friska Junior¹, Trisna Trihapsari², Reza Hilmy Luayyin³, Galang yoga Perwira⁴, Muqaffi Abdillah⁵

^{1, 2} Digital Business Study Program, Institute of Business and Health Technology Muhammadiyah Tulungagung

^{3, 4, 5} Sharia Economics Study Program of the Admad Dahlan Institute Probolinggo

Email : adikadesisetyani@gmail.com

ARTICLE INFO

Article History

Received, 2025/08/12

Revised, 2025/09/07

Accepted,
2025/11/23

Keywords

digital business;
technological innovation;
Islamic economic ethics;
sustainability;
governance.

Copyright © year
Sociosphere



This work is licensed
under a [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/)
4.0 International license

ABSTRACT

Digital business transformation creates opportunities to improve efficiency, expand access, and generate value, yet it also introduces tensions between economic growth, social justice, and environmental responsibility. Islamic economic ethics offers a normative foundation for directing technology toward stakeholder well-being. This study aims to examine the conditions under which technological innovation supports digital business sustainability, clarify the role of Islamic ethics in governance, and develop an operational integrative framework. A qualitative conceptual approach is employed through critical examination and synthesis of literature on digital business models, sustainability, and Islamic economic ethics. The analysis compares arguments and findings, distinguishes normative claims from empirical evidence, and identifies relationships among concepts. The synthesis indicates that technology's contribution to sustainability depends on alignment among digital capabilities, business model configurations, and oversight mechanisms. Formal Sharia compliance alone is insufficient to demonstrate the achievement of ethical objectives without evaluating the distribution of benefits and social and environmental impacts. The study proposes a framework linking digital innovation capabilities, governance grounded in justice, trustworthiness, and public welfare, and multidimensional sustainability outcomes. Proposed indicators include service transparency, user protection, inclusive access, and environmental responsibility. This framework advances an understanding of sustainability as value creation requiring ethical direction and provides a basis for evaluating digital business practices. However, the relationships among its components remain conceptual propositions requiring empirical validation across sectors and institutional contexts.

Citation:

Filled by Journal Manager

INTRODUCTION

Digital business transformation has changed the way companies create, deliver, and derive value through the use of data-driven technologies, connectivity, and automation in cross-sector economic activities (Broccardo et al., 2023). These changes are taking place simultaneously with increasing demands for sustainability, so companies face the need to connect technological innovations with the simultaneous creation of economic, social, and environmental value (Palmié et al., 2025). However, the relationship between digitalization and sustainability is not automatic because digital transformation can generate synergies as well as tensions to corporate sustainability goals (Ologeanu-Taddei et al., 2025). Thus, digital business sustainability needs to be understood through the alignment between technological capabilities, business model configurations, and the consequences of corporate activities for stakeholders (Broccardo et al., 2023). In this context, sharia economic ethics offers a normative perspective that places justice, human welfare, and social responsibility as a substantive part of the assessment of economic activity, beyond the formal fulfillment of transaction requirements (Mergaliyev et al., 2021).

Previous research has shown that the relationship between technology, sustainability, and sharia ethics develops through complementary findings, despite having different units of analysis (Broccardo et al., 2023; Hudaefi, 2020). In Indonesia, Hudaefi's qualitative research shows that financing through sharia fintech supports productive activities and is linked to the goal of reducing poverty, hunger, and inequality, but the findings are not intended as a generalization of cross-border statistics (Hudaefi, 2020). A comparative study of Indonesia, Malaysia, and the United Kingdom identifies weaknesses in sharia supervision and compliance as a challenge to fintech development, while emphasizing the need for regulation, supervisory boards, and standardization of sharia governance (Muryanto, 2023). Meanwhile, research on cross-border Islamic banks, including institutions in Jordan, Indonesia, Bahrain, and the United Kingdom, shows variations in ethical performance when evaluated using a *maqāṣid al-sharī'ah* framework that includes social, environmental, and financial dimensions (Mergaliyev et al., 2021). These cross-contextual findings suggest that digital innovation, sharia compliance, and sustainability achievement need to be linked through clear organizational mechanisms, while taking into account sectoral differences and institutional environments (Hudaefi, 2020; Muryanto, 2023).

However, research gaps are still seen in the explanation of how technological capabilities translate into sustainability outcomes through governance based on sharia economic ethics (Ologeanu-Taddei et al., 2025; Mergaliyev et al., 2021). A critical review of 91 articles found that only 16 articles showed a relationship between the concepts of digital transformation and sustainability, suggesting the need for a more consistent conceptual explanation of the relationship between the two (Ologeanu-Taddei et al., 2025). On the sharia economic side, the evidence on the contribution of fintech to development and the need for supervision has not in itself explained how ethical values affect the

design of value creation and distribution in digital businesses outside of financial services (Hudaefi, 2020; Muryanto, 2023). Therefore, the gap proposed is not the absence of integration studies, but the limitations of analytical linkages between digital capabilities, sharia governance mechanisms, and sustainability indicators that can be evaluated together (Broccardo et al., 2023; Mergaliyev et al., 2021).

To answer this gap, this study offers an integrative framework that connects the capabilities of technological innovation, governance based on sharia ethics, and sustainable value creation as three interrelated components (Broccardo et al., 2023; Mergaliyev et al., 2021). The novelty proposed lies in the operational mapping of the principles of fairness, trust, and benefit into transaction transparency mechanisms, digital decision supervision, user protection, and accountability to stakeholders (Mergaliyev et al., 2021; Muryanto, 2023). The framework proposes evaluation indicators in the form of disclosure of transaction costs and conditions, access to underserved groups, distribution of economic benefits, and social and environmental consequences of the use of technology (Hudaefi, 2020; Broccardo et al., 2023). The relationship between components is formulated as a conceptual proposition that can be tested in subsequent research, so that the research contribution includes an explanation of the integration mechanism as well as the basis for evaluating digital business practices (Ologeanu-Taddei et al., 2025).

Based on these arguments, this study aims to explain the opportunities and tensions of technological innovation for the sustainability of digital businesses, identify the ethical function of sharia economics in its governance, and formulate an operational integration framework (Broccardo et al., 2023; Mergaliyev et al., 2021). The first question is how technological innovation opens up opportunities while creating tensions in the creation of economic, social, and environmental value in digital businesses (Ologeanu-Taddei et al., 2025). The second question is how the principles of sharia economic ethics can be translated into a governance mechanism to direct the use of technology towards fair and responsible value creation (Mergaliyev et al., 2021; Muryanto, 2023). The third question is how the relationship between technological capabilities, sharia governance, and sustainability outcomes can be reconstructed into a conceptual framework along with its evaluation indicators (Broccardo et al., 2023; Hudaefi, 2020).

METHODS

This study uses a systematic literature review with critical conceptual synthesis to explain the relationship between technological innovation, sharia economic ethics, and digital business sustainability through transparent sourcing and analysis procedures (Paul et al., 2021; Sauer & Seuring, 2023). The synthesis is directed at the development of a theoretical framework, by comparing assumptions, concepts, and explanations between the literature before integrating them into a coherent conceptual relationship (Jaakkola, 2020). The research is guided by three critical questions: under what conditions technological innovation supports or hinders the sustainability of digital business; how sharia economic

ethics addresses the tension between profit, justice, and environmental responsibility; and what mechanisms and indicators can explain such integration operationally (Jaakkola, 2020; Sauer & Seuring, 2023). The unit of analysis is in the form of conceptual arguments and empirical findings in the article, with attention to the differences in sectors, countries, and levels of analysis of organizations and business ecosystems (Sauer & Seuring, 2023).

Searches were conducted through Scopus and the Web of Science Core Collection for English or Indonesian language articles published in 2020–2026 until the actual search date, with the date, platform, query, and number of results of each search recorded in the research log (Paul et al., 2021). The search was conducted through three groups of concept pairs: digital business and sustainability, digital business and sharia ethics, and sharia ethics and sustainability, so that literature that has not used all three terms simultaneously remains identified (Paul et al., 2021). The digital keyword block includes "digital business", "digital platform*", "digital transformation", and "fintech"; the sustainability block includes "sustainab*", "social value", and "environmental performance"; while the sharia block includes "Islamic ethic*", "Islamic economic*", "Sharia*", "maqasid", and "maqashid", which are combined using OR operators within blocks and AND between block pairs (Paul et al., 2021). Queries are applied to titles, abstracts, and keywords, then supplemented by reference search and citations of selected articles with the same eligibility criteria (Paul et al., 2021).

Articles are included when peer-reviewed, have full text and DOIs, and describe relevant relationships in at least one of the concept pairs; editorial, duplication, and technical writing with no business implications are excluded (Sauer & Seuring, 2023). Quartiles and SJRs are noted as source characteristics, while evidence eligibility is determined through relevance and content assessment so that journal rankings do not replace methodological evaluation (Sauer & Seuring, 2023). Two reviewers planned to independently screen the title–abstract and full-text, resolve differences through discussion, and document the reasons for exclusion and selection flows using PRISMA 2020 (Page et al., 2021).

Extraction used a structured matrix that contained the identity of the article, country, sector, research design, technology, ethical principles, governance mechanisms, sustainability indicators, findings, and limitations (Sauer & Seuring, 2023). The quality of empirical articles was assessed based on design suitability, data transparency, analytical accuracy, and support for conclusions, while conceptual articles were examined through the clarity of constructs, assumptions, and coherence of arguments (Sauer & Seuring, 2023; Jaakkola, 2020). The assessment was recorded as strong, moderate, or weak with a written reason, and then used to distinguish the strength of support for each synthesis conclusion (Sauer & Seuring, 2023).

The analysis combines deductive coding of digital capabilities, sharia values, governance, and sustainability outcomes with inductive coding to find mechanisms or tensions that are not covered by the initial category (Sauer & Seuring, 2023). The codebook is tested on the first ten articles, or the entire article if there are fewer in number, then revised before the overall coding to clarify the

definition and boundaries of the category (Paul et al., 2021). The synthesis compares supporting and opposing evidence, distinguishes normative claims from empirical findings, and constructs propositions and their application limits without considering conceptual relationships as causal evidence (Jaakkola, 2020). The robustness of the framework is checked by repeating the synthesis after a weak-quality article is issued, while search logs, extraction matrices, codebooks, and analytical decisions are provided as additional material to support replication (Paul et al., 2021; Page et al., 2021).

RESULT AND DISCUSSION

Research Results

A synthesis of the findings of the available literature identifies that the contribution of technological innovation to the sustainability of digital businesses depends on the alignment between technological capabilities, business model configuration, and organizational goals. Broccardo et al. (2023) show that digitalization has the potential to support the creation of economic, social, and environmental value when digital devices are integrated with relevant business factors. However, Ologeanu-Taddei et al. (2025) found that the relationship between digital transformation and sustainability contains synergies as well as tensions. Thus, to answer the first research question, technology adoption is not enough to be an indicator of sustainability; the analysis needs to pay attention to how technology is used and what results are produced for stakeholders.

With regard to the second research question, the literature shows a difference between formal sharia compliance and the achievement of substantive ethical goals. Mergaliyev et al. (2021) show variations in the performance of Islamic banks when the evaluation includes social, environmental, and financial dimensions based on *maqāṣid al-sharīʿah*. Meanwhile, Muryanto (2023) identifies the need to strengthen regulation, supervision, and standardization of sharia fintech governance in Indonesia, Malaysia, and the United Kingdom. Both findings place sharia ethics as the basis for evaluating organizational goals as well as practices. However, the available evidence does not show that the application of sharia principles by itself resolves all the tensions between profit, justice, and environmental responsibility.

To answer the third research question, the combination of findings produced three analytical components: digital innovation capabilities, sharia governance mechanisms, and sustainability outcomes. The first component includes the use of technology in value creation and delivery, the second component includes supervision and accountability, while the third component includes economic, social, and environmental consequences. Hudaefi's (2020) evidence regarding the relationship between sharia fintech financing and productive activities and poverty reduction and inequality provides a basis for indicators of financing access and social benefits. This framework is the result of conceptual reconstruction, so the relationship between its components cannot be stated as a tested causal relationship.

Overall, the available findings support the understanding of digital business sustainability as a multidimensional value creation that requires technological direction through ethical governance. The main limitation of the

synthesis lies in the dominance of sharia evidence from the financial sector, so its application to electronic commerce and non-financial platforms still requires testing.

Discussion

The sustainability of digital business in this synthesis can be interpreted as a matter of innovation direction, since the ability of technology to acquire the meaning of sustainability through the goals and configuration of the business model that uses it (Gregori & Holzmann, 2020). This interpretation is in line with George et al. (2021), who place digital innovation as a means of addressing the problem of sustainable development through the development of entrepreneurial activities. However, this potential does not justify the assumption that increasing digitalization always produces social and environmental benefits, given that technology can also strengthen supervision, power inequality, and worker vulnerability (Trittin-Ulbrich et al., 2021). Therefore, the conceptual contribution of this research lies in the separation between the capacity of technology to create benefits and the organizational conditions that allow those benefits to be realized and distributed responsibly (Gregori & Holzmann, 2020; George et al., 2021).

In answering questions about the state of sustainability, the synthesis findings support the view that technology should be embedded in the value proposition, value creation process, and value acquisition mechanisms of the company, not simply added as an operational tool (Gregori & Holzmann, 2020). This alignment explains why efficiency improvements are not sufficient to assess the success of digital transformation if the benefits are enjoyed only by the company, while the adverse consequences are borne by the user or worker (Trittin-Ulbrich et al., 2021). In contrast to optimistic readings of digital innovation, a critical perspective directs an evaluation of who benefits, who bears the risks, and how corporate decisions can be accounted for (George et al., 2021; Trittin-Ulbrich et al., 2021). Thus, the tension between business growth and sustainability needs to be analyzed as a matter of interest configuration and value distribution, rather than being assumed to disappear once technology is applied (Gregori & Holzmann, 2020).

Islamic economic ethics provides a basis for extending the evaluation from transaction compliance to stakeholder welfare, just as the maqāṣid framework links the assessment of economic activities with ethical, social, environmental, and financial dimensions (Mergaliyev et al., 2021). However, variations in the ethical performance of Islamic banks suggest that the identity of Islamic institutions cannot be treated as automatic evidence of the achievement of these substantive goals (Mergaliyev et al., 2021). In the context of digital business, the implication is that claims of sharia conformity need to be accompanied by an explanation of the supervisory mechanism and proof of benefits for affected parties, rather than stopping at product endorsement (Mergaliyev et al., 2021; Trittin-Ulbrich et al., 2021). This interpretation also limits the research argument: sharia ethics provides a normative orientation, while its effectiveness as a guide to business practices still requires an evaluation of organizational decisions and outcomes (Mergaliyev et al., 2021).

Theoretically, the relationship between digital capabilities, ethical governance, and sustainability outcomes can be developed as a framework that explains how normative goals are translated through the regulation of value-creation activities (George et al., 2021; Mergaliyev et al., 2021). The perspective of institutional logic helps to understand that commercial, digital, and sustainability orientations can complement each other as well as clash in a single business model (Gregori & Holzmann, 2020). This research expands this reading by placing sharia ethics as the basis for assessing the legitimacy of goals and benefit distribution, while digital capabilities explain the means of implementation (Gregori & Holzmann, 2020; Mergaliyev et al., 2021). However, governance cannot yet be stated as a statistically proven mediator, so the proposed relationship should be positioned as a proposition for subsequent testing (George et al., 2021).

The practical implication is the need to evaluate innovation before and after implementation by comparing the company's profits against the social benefits as well as the resulting environmental consequences (Gregori & Holzmann, 2020). As an operational proposal, the evaluation can include the openness of terms of service, data protection, vulnerable user access, and objection handling mechanisms to translate ethical responsibility into verifiable decisions (Trittin-Ulbrich et al., 2021; Mergaliyev et al., 2021). These indicators need to be tailored to the character of the technology and revenue models as the business configuration determines the opportunities as well as the tension of sustainable value creation (Gregori & Holzmann, 2020). Finally, the application of the framework to non-financial platforms requires additional research because the *maqāṣid* evidence used comes from banking, while the relationship between technology and sustainability has a broader organizational context (Mergaliyev et al., 2021; George et al., 2021).

CONCLUSIONS

This conceptual study concludes that the sustainability of digital businesses depends on the alignment between technological innovation capabilities, ethical governance, and economic, social, and environmental value creation. Technology provides opportunities for increased efficiency and expanded access, but these benefits require oversight of the distribution of benefits and consequences for stakeholders. Islamic economic ethics provides a normative orientation for evaluating business decisions through fairness, trust, and benefit, so that sustainability assessments go beyond formal transaction compliance.

The proposed novelty is an integrative framework that connects digital capabilities, sharia governance mechanisms, and sustainability outcomes, accompanied by proposed evaluation indicators. This framework brings together the literature on sustainable digital business models with ethical evaluation based on *maqāṣid al-sharīʿah*, while clarifying the difference between the potential of technology and the achievement of substantive benefits. Its theoretical contribution is in the form of a proposition regarding the role of governance in directing value creation, while its practical contribution is in the form of a basis for the preparation of evaluations of service transparency, user protection, inclusive access, and environmental responsibility.

This conclusion is limited by the nature of conceptual synthesis, the lack of empirical validation of the intercomponent relationships, and the dominance of sharia ethical evidence from the financial sector. Therefore, the proposed framework cannot be used to assert causal relationships or cross-sector effectiveness. Subsequent research needs to develop the size of each construct, test the framework through comparative case studies and quantitative analysis, and compare financial and non-financial platforms in different institutional contexts. Such testing is needed to determine when the integration of sharia technology and ethics produces sustainable benefits, for whom they are created, and what conditions limit their achievement.

REFERENCE

- Broccardo, L., Zicari, A., Jabeen, F., & Bhatti, Z. (2023). How digitalization supports a sustainable business model: A literature review. *Technological Forecasting and Social Change*, 187, 122146. <https://doi.org/10.1016/j.techfore.2022.122146>
- George, G., Merrill, R. K., & Schillebeeckx, S. J. D. (2021). Digital sustainability and entrepreneurship: How digital innovations are helping tackle climate change and sustainable development. *Entrepreneurship Theory and Practice*, 45(5), 999–1027. <https://doi.org/10.1177/1042258719899425>
- Gregori, P., & Holzmann, P. (2020). Digital sustainable entrepreneurship: A business model perspective on embedding digital technologies for social and environmental value creation. *Journal of Cleaner Production*, 272, 122817. <https://doi.org/10.1016/j.jclepro.2020.122817>
- Hudaefi, F. A. (2020). How does Islamic fintech promote the SDGs? Qualitative evidence from Indonesia. *Qualitative Research in Financial Markets*, 12(4), 353–366. <https://doi.org/10.1108/QRFM-05-2019-0058>
- Jaakkola, E. (2020). Designing conceptual articles: Four approaches. *AMS Review*, 10(1–2), 18–26. <https://doi.org/10.1007/s13162-020-00161-0>
- Mergaliyev, A., Asutay, M., Avdukic, A., & Karbhari, Y. (2021). Higher ethical objective (Maqasid al-Shari'ah) augmented framework for Islamic banks: Assessing ethical performance and exploring its determinants. *Journal of Business Ethics*, 170, 797–834. <https://doi.org/10.1007/s10551-019-04331-4>
- Muryanto, Y. T. (2023). The urgency of sharia compliance regulations for Islamic Fintechs: A comparative study of Indonesia, Malaysia and the United Kingdom. *Journal of Financial Crime*, 30(5), 1264–1278. <https://doi.org/10.1108/JFC-05-2022-0099>
- Ologeanu-Taddei, R., Hönigsberg, S., Weritz, P., Wache, H., Mittermeier, F., Tana, S., Dang, D., Hautala-Kankaanpää, T., & Pekkola, S. (2025). The relationship of digital transformation and corporate sustainability: Synergies and

tensions. *Technological Forecasting and Social Change*, 210, 123809. <https://doi.org/10.1016/j.techfore.2024.123809>

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>

Palmié, M., Aebbersold, A., Oghazi, P., Pashkevich, N., & Gassmann, O. (2025). Digital-sustainable business models: Definition, systematic literature review, integrative framework and research agenda from a strategic management perspective. *International Journal of Management Reviews*, 27(3), 346–374. <https://doi.org/10.1111/ijmr.12380>

Paul, J., Lim, W. M., O’Cass, A., Hao, A. W., & Bresciani, S. (2021). Scientific procedures and rationales for systematic literature reviews (SPAR-4-SLR). *International Journal of Consumer Studies*, 45(4), O1–O16. <https://doi.org/10.1111/ijcs.12695>

Sauer, P. C., & Seuring, S. (2023). How to conduct systematic literature reviews in management research: A guide in 6 steps and 14 decisions. *Review of Managerial Science*, 17, 1899–1933. <https://doi.org/10.1007/s11846-023-00668-3>

Trittin-Ulbrich, H., Scherer, A. G., Munro, I., & Whelan, G. (2021). Exploring the dark and unexpected sides of digitalization: Toward a critical agenda. *Organization*, 28(1), 8–25. <https://doi.org/10.1177/1350508420968184>