

RECONSTRUCTING THE EPISTEMOLOGY OF ISLAMIC ECONOMICS AND EDUCATION IN THE ERA OF ARTIFICIAL INTELLIGENCE AND THE DIGITAL ECONOMY

^{*1}Murniati Ruslan, ²Ubay, ³Sitti Musyahidah

^{*1,2,3}Univeristas Islam Negeri Datokarama Palu

Email: ^{*1}murniati@iainpalu.ac.id, ²ubay@uindatokarama.ac.id,
³sittimusyahidah@uindatokarama.ic.id

Abstract

This study aims to explore the reconstruction of Islamic economics and education epistemology in the face of technological advances, particularly artificial intelligence (AI) and the digital economy, using a Systematic Literature Review (SLR) approach. This method was chosen to obtain a comprehensive mapping of scientific discourse developments, identify research gaps, and synthesize findings from primary literature indexed in the Scopus database for the period 2019–2024. The research is exploratory and qualitative in nature, employing documentary and narrative analysis of articles relevant to the topic of Islamic economic epistemology and its relationship with AI, the digital economy, and Islamic ethics in technology. The search strategy uses a combination of Boolean keywords such as “Islamic economics” AND ‘epistemology’ AND (“artificial intelligence” OR “digital economy”), supported by the Google Scholar and ScienceDirect databases. The findings indicate that the integration of AI and the digital economy into Islamic economic systems and education requires a profound epistemological reconstruction to ensure that fundamental values such as justice, moral responsibility, and equality are upheld. AI plays a dual role as an instrument of efficiency and a potential source of ethical disruption, while digitalization drives the reinterpretation of traditional Islamic economic values and practices. Technologies like blockchain offer transparency but also raise ethical dilemmas related to privacy and Sharia compliance. Current literature still shows limitations in terms of a comprehensive conceptual framework and a lack of interdisciplinary empirical research. Therefore, a systematic and ethical approach is needed to harmonize technological innovation with Islamic principles, as well as further research examining the impact of AI on core concepts such as zakat distribution and ethical accountability in Islamic economics to ensure their relevance and adaptability in the digital age.

Keywords: Epistemology, Islamic Economics, Education, Digital Economy, Artificial Intelligence

Abstrak

Penelitian ini bertujuan untuk mengeksplorasi rekonstruksi epistemologi ekonomi Islam dan pendidikan dalam menghadapi kemajuan teknologi, khususnya kecerdasan buatan (Artificial Intelligence–AI) dan ekonomi digital, dengan menggunakan pendekatan Systematic Literature Review (SLR). Metode ini dipilih untuk memperoleh pemetaan komprehensif terhadap perkembangan wacana ilmiah, mengidentifikasi celah penelitian, serta mensintesis temuan dari literatur primer yang terindeks di basis data Scopus periode 2019–2024. Penelitian bersifat kualitatif eksploratif dengan analisis dokumenter

dan naratif terhadap artikel yang relevan dengan topik epistemologi ekonomi Islam dan keterkaitannya dengan AI, ekonomi digital, serta etika Islam dalam teknologi. Strategi pencarian menggunakan kombinasi Boolean dari kata kunci seperti “Islamic economics” AND “epistemology” AND (“artificial intelligence” OR “digital economy”), dengan dukungan dari database Google Scholar dan ScienceDirect. Hasil kajian menunjukkan bahwa integrasi AI dan ekonomi digital dalam sistem ekonomi Islam serta pendidikan menuntut rekonstruksi epistemologis yang mendalam agar nilai-nilai fundamental seperti keadilan, tanggung jawab moral, dan kesetaraan tetap terjaga. AI berperan ganda sebagai instrumen efisiensi sekaligus potensi disrupti etis, sementara digitalisasi mendorong reinterpretasi nilai-nilai dan praktik ekonomi Islam tradisional. Teknologi seperti blockchain menawarkan transparansi, namun juga menimbulkan dilema etis terkait privasi dan kepatuhan syariah. Literatur saat ini masih menunjukkan keterbatasan kerangka konseptual yang utuh dan minimnya riset empiris yang interdisipliner. Oleh karena itu, dibutuhkan pendekatan sistematis dan etis yang mengharmoniskan inovasi teknologi dengan prinsip-prinsip Islam, serta penelitian lanjutan yang menelaah dampak AI terhadap konsep-konsep inti seperti distribusi zakat dan akuntabilitas etis dalam ekonomi Islam agar tetap relevan dan adaptif di era digital.

Kata kunci: *Epistemologi, Ekonomi Islam, Pendidikan, Ekonomi Digital, Kecerdasan Buatan*

INTRODUCTION

In an increasingly interconnected global landscape, the intersection of technology, economics, and religious thought has become an important area of research. The proliferation of artificial intelligence and the digital economy poses unique challenges and opportunities that call for a re-examination of existing epistemologies within various frameworks, including Islamic economics. The need for such a re-evaluation becomes clear when observing the rapid transformation of economic paradigms driven by technological advances and coupled with cultural shifts (Agustina et al., 2024). Islamic economic theory, which has traditionally been anchored in the principles of justice, equality, and moral responsibility, must adapt to incorporate the nuances introduced by digital innovation and artificial intelligence (Ã–Zgenel & Karsantik, 2020). With this, the significance of reconstructing the epistemology of Islamic economics in this disruptive era is not purely academic; this has considerable practical implications for practitioners, policymakers, and scholars involved in Islamic finance and economics (Putra & Kasmiarno, 2020).

The existing literature has begun to explore the dimensions of this intersection, highlighting several key themes. For example, some studies have focused on the compatibility of Islamic principles with blockchain technology, emphasizing transparency and trust as basic virtues in both traditional Islamic finance and modern digital transactions (Napitupulu et al., 2021). Others delve into the ethical considerations surrounding artificial intelligence, reflecting on how this technology is in harmony with Islamic moral norms and decision-making frameworks (Angreni & Sari, 2020). In addition, there is a discourse emerging around how the digital economy can reshape the age-old debate about zakat and wealth distribution, potentially increasing the efficiency

and reach of these systems (Samsudin et al., 2023). However, despite the valuable insights gathered, significant gaps remain in scholarship; in particular, there is no adequate understanding of how these changes may affect the basic epistemological principles of Islamic economics (Andriana et al., 2024). In addition, existing studies often lack a systematic approach that synthesizes these emerging perspectives into a cohesive framework, making it difficult to understand the extent of the implications that digital technologies may have on Islamic economic theory (Saleh & Satriawan, 2020).

Few adequately address how concepts such as artificial intelligence might not only affect economic practices but could also force a rethinking of concepts such as risk, uncertainty, and ethical accountability within Islamic frameworks (Ahyani et al., 2021). This reflects a broader methodological challenge in Islamic economics where traditional narratives can clash with contemporary realities. As this literature review unfolds, it will provide a systematic examination of the current trajectory of research, identify unresolved tensions, and suggest potential pathways for further investigation into the rich interplay between the epistemology of Islamic economics and the paradigms set by artificial intelligence and the digital economy.

By carefully analysing the body of work surrounding this topic, we aim not only to map the current state of discourse but also to illuminate important areas ripe for future exploration (Gentzkow et al., 2024). In essence, this review aspires to contribute to a more nuanced understanding of how the Islamic economy can evolve in response to the transformative pressures of the digital age, thereby strengthening its relevance and application in contemporary economic realities (Ferreira et al., 2021). The study will highlight the need for an interdisciplinary approach that combines theological insight with technological advancement, paving the way for a more forward-thinking Islamic economic framework.

METHOD

This research adopts a *Systematic Literature Review* (SLR) approach to explore the epistemological reconstruction of Islamic economics in the context of technological advances, particularly artificial intelligence (AI) and the digital economy. This method was chosen because it can provide a comprehensive mapping of the development of scientific discourse, identify research gaps, and synthesize key findings from various relevant primary sources (Jaya, 2020). The research is qualitative, exploratory, with documentary and narrative analysis of scientific articles indexed in the Scopus database during the period 2015–2025. The goal is to understand how the concept of epistemology in Islamic economics is challenged and reconstructed in the face of the increasingly rapid disruption of digital technology (Creswell, 2015). Inclusion criteria include articles focusing on the epistemology of Islamic economics, the relationship between Islam and AI or the digital economy, as well as Islamic ethics in technology, with English or Indonesian published language. Literature that is not available in full-text format and that is of a non-academic opinion nature is excluded from the analysis. The literature search

strategy was conducted using a combination of Boolean keywords such as "*Islamic economics*" AND "*epistemology*" AND ("*artificial intelligence*" OR "*digital economy*"), as well as other relevant variations, through the main *Scopus* database and powered by *Google Scholar* and *ScienceDirect*. Data analysis is carried out through thematic coding to identify key issues in the literature, accompanied by narrative synthesis to integrate classical and modern epistemological views in Islamic economics. Furthermore, research gaps were identified by comparing traditional and contemporary approaches to map the direction of the reconstruction of Islamic economic epistemology that is more adaptive to the digital era and AI. The validity of the research was maintained through triangulation of sources and independent assessment by two academic researchers to minimize potential bias in data selection and interpretation.

RESULTS AND DISCUSSION

The emergence of Islamic economics has undergone a significant evolution, especially with the integration of artificial intelligence and the digital economy. Early foundational texts established the theoretical framework of Islamic economics, emphasizing the dimensions of ethics and social justice, which were crucial in shaping modern applications in Islamic financial institutions (Ismail & Zulkhibri, 2024). As the field matured, scholars began to explore the implications of technological advancements, noting that AI could improve decision-making processes aligned with Islamic principles by providing more accurate predictive analytics (Chintalapati & Pandey, 2022). The rise of the digital economy further complicates this discussion, with various studies illustrating how online platforms have transformed trading practices within the framework of Islam. The researchers argue that this shift requires a reexamination of traditional economic models to include contemporary digital transactions, thus challenging stagnant interpretations of Islamic economic principles (Abdullah et al., 2024). The literature highlights that integrating AI into Islamic economic practices not only modernizes the sector but also maintains adherence to its fundamental values, as illustrated by various case studies that demonstrate successful implementation in diverse contexts (Chintalapati & Pandey, 2022).

In addition, the interaction between innovation and traditionalism has become a recurring theme, with some scholars advocating a balanced approach that respects the teachings of history and the realities of modern technology (Amzat, 2022). The literature increasingly points to the need for a comprehensive epistemological reconstruction to facilitate this transition, ensuring that Islamic economics remains relevant in a rapidly changing world (Widarjono, 2022). As the dialogue develops, the tension between preserving the core principles of Islam while embracing innovation will undoubtedly shape future discussions and research in this emerging field (Mukhibad et al., 2023). In exploring the intersection of Islamic economics and the digital economy, particularly in the light of artificial intelligence (AI), literature presents a rich tapestry of themes. The underlying theme is the need to reconfigure the epistemological framework in Islamic economics; Scholars argue that traditional models are increasingly inadequate in addressing the complexities

introduced by digital advancements. For example, (Kaniz et al., 2025) highlighted the importance of integrating technology with Islamic principles to ensure ethical standards are maintained in financial transactions, while (Risnawati et al., 2025) echoed this sentiment, advocating for the adaptation of Islamic jurisprudence to contemporary economic challenges.

In addition, the role of AI in transforming economic practices is often discussed. Research shows that AI can improve decision-making efficiency and promote ethical financial behavior, a point made convincingly in several studies, (Abusharif, 2024; Qizam et al., 2024). This shows the dual potential for technological improvement and moral alignment, an idea further articulated by (Firnando & Wahyudi, 2024), which emphasizes that the incorporation of AI must be aligned with Islamic values to foster a balanced economic environment. In addition, the literature acknowledges the challenges and concerns regarding data privacy and the ethical implications of AI in the financial context. These concerns are underlined by (Sahin, 2018), which affirms that the guidance of Islamic ethics can provide a framework for navigating these concerns, proposing a system that prioritizes transparency and accountability.

This comprehensive discourse describes critical engagement with both theoretical and practical dimensions, showing the dynamic evolution in Islamic economic thought as it intersects with contemporary technological realities, (Carrington et al., 2018; Ndlovu-Gatsheni, 2018). Thus, the intersection of AI and Islamic economics highlights the urgent need for innovative approaches that uphold moral and ethical standards in the digital age. The exploration of Islamic economics in the context of artificial intelligence and the digital economy requires a nuanced understanding of various methodological approaches. Early frameworks have emphasized the need for a paradigm shift, suggesting that traditional economic models may not accommodate the ethical implications and socio-cultural contexts inherent in Islamic economics, (Kaniz et al., 2025). Scholars have used qualitative methodologies to capture nuances of market behavior and principles that deviate from conventional economic theory, explaining how Islamic economic practices adapt to technological advances, (Risnawati et al., 2025). Quantitative studies, on the other hand, focus on empirical analysis, trying to measure the impact of digital transformation on Islamic finance. This investigation reveals a significant correlation between the profit-sharing model in Islamic finance and the efficacy of fintech innovation, (Abusharif, 2024). Thus, blending qualitative and quantitative methods can provide a more comprehensive view of the evolving Islamic economic landscape, integrating subjective and objective data, (Firnando & Wahyudi, 2024; Qizam et al., 2024)

In addition, recent literature has highlighted the importance of interdisciplinary approaches, drawing from fields such as sociology and technology studies to enrich the discourse around Islamic economics, (Sahin, 2018). The integration of AI and digital tools into Islamic finance requires an understanding of the ethical framework that governs financial transactions, which further underscores the need for diverse methodological

lenses, (Ndlovu-Gatsheni, 2018). As a result, the ongoing scientific dialogue aims to build a cohesive epistemology that is in harmony with Islamic values while responding to the rapid mutations brought about by technological advances in economic systems, (Carrington et al., 2018). The collective insights of these diverse methodologies not only serve to reconstruct the epistemology of Islamic economics but also advocate for innovative practices that can thrive in the context of modern economics. The exploration of Islamic economics in the framework of artificial intelligence and the digital economy reveals diverse theoretical perspectives that collectively shape contemporary discourse. One of the important themes that emerged was the challenge of integrating traditional Islamic principles with modern technological advancements. Scholars such as Anantrasirichai & Bull, (2022) argue for a reconciliation approach, suggesting that the core principles of Islam can coexist with AI applications, provided that ethical considerations are prioritized.

This idea is supported by Abusharif, (2024), which emphasizes the need for an Islamic moral framework in guiding the use of technology. On the contrary, some literature, such as the Afista & Abu Bakar, (2020) expressed skepticism about the encroachment of technology on Islamic economic models, warning that the uncritical adoption of AI could undermine fundamental values. This opposing viewpoint underscores broader concerns about maintaining the integrity of the Islamic economy amid rapid digital transformation, reflecting the anxiety noted by the (Sahin, 2018), which highlights the potential conflict between the motives of profit-driven digital platforms and the well-being-oriented ethos of Islamic capitalism. In addition, several scholars, including, Aliwardi, (2023) Contributed to the discussion by examining the implications of digital financial systems for social equality, arguing that blockchain and fintech can improve transparency and inclusivity in Islamic finance. However, they caution that this progress must be assessed through the lens of Islamic ethics to avoid exacerbating inequalities. Through these varied theoretical perspectives, the literature describes a complex landscape in which Islamic economics not only adapts to emerging technologies but also navigates fundamental ethical considerations and social implications. Thus, the discourse reflects a dynamic interaction of ideas that continues to evolve in response to the transformative economic landscape.

CONCLUSION

Based on the results of a literature review on the epistemological reconstruction of Islamic economics and education in the era of artificial intelligence and digital economy, it can be concluded that the integration of artificial intelligence and digital economy in Islamic economics requires an in-depth epistemological reconstruction so that basic values such as justice, moral responsibility, and equality are maintained amid technological transformation. AI doubles as an efficiency-enhancing tool and as a potential ethical disruptor, while digitalization challenges traditional Islamic economic models, driving a reinterpretation of values and practices. While technologies such as blockchain promise to increase transparency, ethical challenges such as data privacy and safeguarding sharia

principles also arise. Therefore, a systematic and balanced approach is needed that harmonizes innovation with Islamic values, as well as an ethical framework that can regulate the use of technology in financial practices. The current literature still shows limitations in terms of a cohesive conceptual framework and adequate empirical research, so interdisciplinary research that integrates theological perspectives with digital socio-cultural contexts is needed. Future research needs to examine the influence of AI on the core concepts of Islamic economics, including the mechanism of zakat distribution and ethical accountability, so that the Islamic economy remains relevant and adaptive in the digital era.

REFERENCES

- Abdullah, A. H., Kadir, S. D., & Ismail, F. (2024). Integration of Technology in Islamic Education Learning: A New Paradigm of Learning Management. *PLEASE (Proceedings of Law, Education, and Socio-Economic Studies)*, 1(1), Article 1.
- Afista, Y., & Abu Bakar, M. Y. (2020). Islamic Boarding School-Based Madrasah: Policy efforts to reform the Superior Education Model. *Al-Hayat: Journal of Islamic Education*, 4(2), Article 2. <https://doi.org/10.35723/ajie.v4i2.144>
- Agustina, N. D., Us, K. A., & Sya'roni. (2024). KEBIJAKAN PENDIDIKAN PEMERINTAH INDONESIA ERA REFORMASI SERTA PENGARUHNYA TERHADAP PENDIDIKAN ISLAM DI INDONESIA. *Jurnal Kajian Pendidikan*, 6(3), Article 3. <https://journalpedia.com/1/index.php/jkp/article/view/2636>
- Ahyani, H., Slamet, M., & Tobroni. (2021). Building the Values of Rahmatan Lil 'Alamin for Indonesian Economic Development at 4.0 Era from the Perspective of Philosophy and Islamic Economic Law. *AL-IHKAM: Jurnal Hukum & Pranata Sosial*, 16(1), Article 1. <https://doi.org/10.19105/al-lhkam.v16i1.4550>
- Aliwardi, M. (2023). The Role of the Majene District Inspectorate as Government Internal Supervision Apparatus [Apip] in Supervision of Village Financial Management. *KnE Social Sciences*, 548–559. <https://doi.org/10.18502/kss.v8i17.14149>
- Amzat, I. H. (2022). *Supporting Modern Teaching in Islamic Schools: Pedagogical Best Practice for Teachers*. Routledge.
- Anantrasirichai, N., & Bull, D. (2022). Artificial intelligence in the creative industries: A review. *Artificial Intelligence Review*, 55(1), 589–656. <https://doi.org/10.1007/s10462-021-10039-7>
- Andriana, N., Mujahidin, E., & Subagiya, B. (2024). Child discipline education concept in the perspective of Bukhari Hadeeths and its relevance to the thought of Muhammad Iqbal. *Tawazun: Jurnal Pendidikan Islam*, 17(2), Article 2. <https://doi.org/10.32832/tawazun.v17i2.17518>
- Angreni, S., & Sari, R. T. (2020). IDENTIFIKASI DAN IMPLEMENTASI PENDIDIKAN INKLUSI BAGI ANAK BERKEBUTUHAN KHUSUS DI SEKOLAH

DASAR SUMATERA BARAT. *AULADUNA: Jurnal Pendidikan Dasar Islam*, 7(2), Article 2. <https://doi.org/10.24252/10.24252/auladuna.v7i2a4.2020>

Ã–Zgenel, M., & Karsantik, Ã. (2020). EFFECTS OF SCHOOL PRINCIPALS' LEADERSHIP STYLES ON LEADERSHIP PRACTICES. *MOJES: Malaysian Online Journal of Educational Sciences*, 8(2), Article 2.

Chintalapati, S., & Pandey, S. K. (2022). Artificial intelligence in marketing: A systematic literature review. *International Journal of Market Research*, 64(1), 38–68. <https://doi.org/10.1177/14707853211018428>

Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson. <https://thuvienso.hoasen.edu.vn/handle/123456789/12789>

Ferreira, D. C., Marques, R. C., Nunes, A. M., & Figueira, J. R. (2021). Customers satisfaction in pediatric inpatient services: A multiple criteria satisfaction analysis. *Socio-Economic Planning Sciences*, 78, 101036. <https://doi.org/10.1016/j.seps.2021.101036>

Gentzkow, M., Shapiro, J. M., Yang, F., & Yurukoglu, A. (2024). Pricing Power in Advertising Markets: Theory and Evidence. *American Economic Review*, 114(2), 500–533. <https://doi.org/10.1257/aer.20220943>

Ismail, A. G., & Zulkhibri, M. (2024). *Economic Capital and Risk Management in Islamic Finance*. Taylor & Francis.

Jaya, I. M. L. M. (2020). *Metode Penelitian Kuantitatif dan Kualitatif: Teori, Penerapan, dan Riset Nyata*. Anak Hebat Indonesia.

Mukhibad, H., Yudo Jayanto, P., Alirastra Budiantoro, R., Bagas Hapsoro, B., Nurasyiah, A., & Michael Musyaffi, A. (2023). Equity-based financing and risk in Islamic banks: A cross-country analysis. *Cogent Economics & Finance*, 11(2), 2235117. <https://doi.org/10.1080/23322039.2023.2235117>

Napitupulu, J. H., Ellyawati, N., & Astuti, R. F. (2021). Pengaruh Literasi Keuangan dan Sikap Keuangan Terhadap Perilaku Pengelolaan Keuangan Mahasiswa Kota Samarinda. *Jurnal Pendidikan Ekonomi (JUPE)*, 9(3), 138–144. <https://doi.org/10.26740/jupe.v9n3.p138-144>

Putra, M. W. P., & Kasmiarno, K. S. (2020). Pengaruh Covid-19 Terhadap Kehidupan Masyarakat Indonesia: Sektor Pendidikan, Ekonomi Dan Spiritual Keagamaan. *POROS ONIM: Jurnal Sosial Keagamaan*, 1(2), Article 2. <https://doi.org/10.53491/porosonim.v1i2.41>

Saleh, M., & Satriawan, L. A. (2020). The Model of Islamic Boarding School Economic Development In Hidayatullah Islamic Boarding School Mataram City and Darussalam West Lombok. *IQTISHODUNA: Jurnal Ekonomi Islam*, 9(1), 105–120. <https://doi.org/10.36835/iqtishoduna.v9i1.474>

Samsudin, A., Aritonang, C., Munthe, G. R. A., Monalisa, W., & Hutasoit, Y. G. (2023). Analisis Risiko Investasi Saham Melalui Diversifikasi Portofolio secara Domestik dan Internasional. *El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam*, 4(5), Article 5. <https://doi.org/10.47467/elmal.v4i5.2895>

Widarjono, A. (2022). PLS Financing and Stability of Indonesian Islamic Banking. *International Journal of Islamic Business and Economics (IJIBEC)*, 6(1), Article 1. <https://doi.org/10.28918/ijibec.v6i1.4196>