

Digital Transformation and the Future of the Halal Value Chain: a Literature Review from the Maqashid Sharia Perspective

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Abstract

The development of digital technology has fundamentally transformed the halal value chain landscape, from production, certification, traceability, and distribution to the consumption of halal products (Qizam, Berakon, & Ali, 2025; Harsanto, Farras, Firmansyah, Pradana, & Apriliadi, 2024). Amid this acceleration, studies on the halal value chain remain dominated by technical and managerial supply-chain approaches, while the underlying philosophical-ethical dimension maqashid sharia has not yet been widely explored systemically (Mufid, 2023). The novelty of this article lies in its use of Jasser Auda's (2008) systems approach to maqasid al-shariah to read the phenomenon of digital transformation in the halal value chain, a subject that has so far been discussed mostly through conventional supply chain management approaches (Harsanto et al., 2024; Ellahi, Wood, Khan, & Bekhit, 2025) without an adequate maqasidi philosophical foundation. This study aims to analyze how Auda's systemic features of maqasid cognition, wholeness, openness, hierarchy with purposefulness, multidimensionality, and purposefulness can serve as an evaluative framework for digital transformation in the halal value chain. The method used is library research, examining and synthesizing relevant primary and secondary literature. The findings show that digital transformations such as blockchain, artificial intelligence, and digital traceability systems have the potential to strengthen the achievement of maqasid at both the individual and public levels when designed with the principles of systemic openness and maslahah balance, but risk reducing sharia objectives to mere administrative compliance if applied only partially.

Keywords: *Maqasid Sharia, Digital Transformation, Halal Value Chain, Systems Approach, Jasser Auda*

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INTRODUCTION

The global halal industry today is no longer merely a matter of compliance with rules on whether a product may or may not be consumed; it has developed into a complex, cross-sectoral economic ecosystem spanning food, pharmaceuticals, cosmetics, fashion, finance, and tourism (Dupi & Baloch, 2025). The continually rising projected growth of the world's Muslim population has further driven expanding demand for halal products and services, making the halal value chain (HVC) the backbone connecting producers, certification bodies, distributors, and end consumers (Harsanto, Pradana, Firmansyah, Apriliadi, & Farras, 2024). At the same time, the Fourth Industrial Revolution and the acceleration of digitalization have permeated nearly every link of this chain, from the application of blockchain for traceability and artificial intelligence for detecting non-halal content, to digital platforms for the marketing and cross-border distribution of halal products (Ellahi, Wood, Khan, & Bekhit, 2025; Harsanto, Farras, Firmansyah, Pradana, & Apriliadi, 2024).

Digital transformation in the halal value chain carries two faces at once. On one hand, digitalization offers operational efficiency, transparency, and stronger consumer trust through technology-based traceability systems (Qizam, Berakon, & Ali, 2025). Recent bibliometric studies even show that research on digital transformation in the halal industry has continued to grow since 2018, peaking in 2024, with Indonesia and Malaysia as the main contributors, alongside a thematic shift away from mere certification and food safety toward cutting-edge technologies such as blockchain, artificial intelligence, and machine learning (Dupi & Baloch, 2025). On the other hand, this technological acceleration also brings new challenges, such as digital infrastructure gaps between regions, limited technological literacy among micro, small, and medium enterprises (MSMEs), and the risk that technology adoption stops at the administrative-formal level without touching the essence of sharia objectives themselves (Adinugraha, Fikri, & Andrean, 2024; Darmawan, Alhifni, & Rahman, 2024).

The fundamental problem arising from this phenomenon is that most studies on halal value chain digitalization remain dominated by a technical-instrumental supply chain management perspective, such as measuring logistics performance, cost efficiency, and technology optimization (Harsanto, Pradana, Firmansyah, Apriliadi, & Farras, 2024; Sarasi, Yunizar, & Satmoko, 2025). Such approaches are important but insufficient to answer the more fundamental question of the extent to which digital transformation truly serves the objectives of sharia (maqashid sharia), which constitute the spirit underlying the existence of halal products and services. In fact, epistemologically, halal is not merely a binary legal category (halal-haram), but a manifestation of the broader maqashid sharia, namely the protection of religion, life, intellect, lineage, and property (Mufid, 2023).

This is where the relevance of Jasser Auda's (2008) framework, presented in his work *Maqasid Al-Shariah as Philosophy of Islamic Law: A Systems Approach*, becomes important to introduce. Auda (2008) critiques the classical maqasid approach, which tends to be partial, atomistic, and confined to a closed list of five or six dharuriyat maqasid. Instead, Auda (2008) proposes a systems approach to understanding maqasid sharia, adopting features of systems thinking such as cognitive nature, wholeness, openness, hierarchy with purposefulness, multidimensionality, and purposefulness itself as the basic character of Islamic law. This approach allows maqashid sharia to be read not as a static list of values, but as a dynamic system that remains open to the changes of the times including technological change without

losing its orientation toward its objectives (Musarrofa & Muttaqin, 2024; Al-Turabi & Auda, 2025).

Several recent studies have attempted to connect Auda's systems approach with various fields of contemporary Islamic law, for example in the context of family law in the digital era (Musarrofa & Muttaqin, 2024), maqasid-based legal reform for social transformation (Al-Turabi & Auda, 2025), and the position of maqasid within the sources of Islamic law in general (Alias, Abdullah, Osman, Ismail, & Kamis, 2025). Nevertheless, the specific application of Auda's systems framework to the issue of digital transformation in the halal value chain remains a gap that has not been extensively explored. Most sharia economics literature on economic maqasid still stops at a normative-philosophical level without elaborating on concrete contemporary phenomena as specific as the digitalization of the halal value chain (Mufid, 2023).

Based on this background, this article is structured to answer several research questions: first, how can the systemic features of Auda's (2008) maqasid be used as an analytical lens for reading the phenomenon of digital transformation in the halal value chain; second, to what extent does the digital transformation currently occurring in the halal value chain reflect or fail to reflect the full achievement of maqasid sharia; and third, what challenges and opportunities are faced in integrating maqasid principles into the design of future halal value chain policy and technology.

The objectives of this research are: (1) to construct an analytical framework based on Jasser Auda's (2008) systems approach for reading digital transformation in the halal value chain; (2) to map the contributions and risks of digital transformation to the achievement of maqasid sharia based on a synthesis of recent literature; and (3) to formulate theoretical and practical implications for the future development of a maqasid-oriented halal value chain.

Academically, this article is expected to contribute to enriching the discourse of sharia economics, which has so far emphasized quantitative-instrumental approaches (Qizam, Berakon, & Ali, 2025; Harsanto, Pradana, Firmansyah, Apriliadi, & Farras, 2024), by reintroducing the philosophical dimension of maqasid as a holistic evaluative framework. Practically, this study is expected to serve as a reference for policymakers, halal industry practitioners, and academics in designing halal value chain digital transformation strategies that are not merely oriented toward efficiency and administrative compliance, but also toward the more essential and sustainable objectives of sharia.

The urgency of this study can also be seen from the perspective of national policy. Indonesia's Sharia Economic Masterplan positions the strengthening of the halal value chain as one of the main strategies for developing the sharia economy, with digitalization cited as one of its acceleration instruments (Darmawan, Alhifni, & Rahman, 2024). However, empirical findings show that the majority of halal MSME actors still face significant gaps in digital literacy and infrastructure, meaning that the potential benefits of digitalization have not yet been evenly distributed (Adinugraha, Fikri, & Andrean, 2024). This condition reinforces the importance of an evaluative framework that considers not only the technical readiness of digitalization, but also its alignment with public *maslahah*, as emphasized in the concept of sharia economic maqasid (Mufid, 2023).

This article is organized systematically into four main sections following the introduction. The methodology section explains the literature search and analysis strategy

used. The results and discussion section presents a synthesis of literature findings mapped onto Auda's (2008) six systemic features of maqasid, while also discussing their implications for the phenomenon of digital transformation in the halal value chain. The concluding section summarizes the main findings, the limitations of the study, and recommendations for further research particularly empirical research that can quantitatively or qualitatively test the theoretical propositions developed in this article.

RESEARCH METHODOLOGY

This study uses the library research method, a method that collects, examines, and synthesizes data from various literature sources to answer research questions without involving field data collection (Mufid, 2023). This method was chosen based on the nature of the research, which aims to build a conceptual-theoretical framework rather than to empirically test relationships between variables.

The primary data source in this study is Auda's (2008) work, *Maqasid Al-Shariah as Philosophy of Islamic Law: A Systems Approach*, which serves as both the grand theory and the main analytical lens. Secondary data sources consist of Mufid's (2023) book, *Maqasid Ekonomi Syariah*, as well as reputable international journal articles and accredited national journal articles discussing digital transformation, the halal value chain, and maqasid sharia, published within the last three to five years.

The literature search was conducted through academic databases such as Google Scholar, Scopus, and Sinta, using keywords including “halal value chain,” “digital transformation halal industry,” “maqasid al-shariah systems approach,” and “maqasid ekonomi syariah.” The inclusion criteria were: (1) reputable international journal articles published within the last three years; (2) Sinta-accredited national journal articles published within the last five years; and (3) direct thematic relevance to the digitalization of the halal value chain or to maqasid sharia through Auda's systems approach.

The data analysis technique used content analysis and thematic synthesis, involving the following stages: data reduction; categorization of literature findings based on Auda's (2008) six systemic features of maqasid cognition, wholeness, openness, hierarchy with purposefulness, multidimensionality, and purposefulness; followed by interpretation and the drawing of analytical conclusions. This approach allowed the researcher to systematically map the contributions and risks of digital transformation to the achievement of maqasid sharia in the context of the halal value chain.

RESULTS AND DISCUSSION

The literature synthesis conducted in this study shows that digital transformation in the halal value chain can be more fully understood when mapped onto the six systemic features proposed by Auda (2008): cognitive nature, wholeness, openness, hierarchy with purposefulness, multidimensionality, and purposefulness. These six features serve as the analytical framework for reading findings from recent literature on halal industry digitalization.

First, in terms of cognition, Auda (2008) emphasizes that Islamic law, including its maqasid, must be understood as a human construction of knowledge that is relative and continuously evolving, rather than a fixed and singular reality. This feature is relevant to the

finding that industry actors' understanding of halal digitalization remains diverse and stratified. Adinugraha, Fikri, and Andrean (2024) reveal that the readiness of halal MSMEs to adopt digital technology varies considerably, influenced by the level of digital literacy, access to infrastructure, and understanding of the technology's benefits. This cognitive variation shows that the success of digital transformation in the halal value chain cannot be separated from efforts to build business actors' epistemic awareness of the link between technology and the broader objectives of sharia, rather than treating it merely as an administrative obligation.

Second, the feature of wholeness emphasizes that maqasid sharia must be understood as a single, interrelated system, not as separate, standalone fragments of value (Auda, 2008). In the context of the halal value chain, this feature is reflected in efforts to integrate the upstream-to-downstream supply chain through digital technology. Harsanto, Farras, Firmansyah, Pradana, and Apriliadi (2024), through a systematic review of Industry 4.0 digital technologies in the halal supply chain, show that the application of blockchain, artificial intelligence, and the Internet of Things contributes to unifying production, certification, and distribution processes within a single, integrated, and mutually verifiable ecosystem. Similarly, Ellahi, Wood, Khan, and Bekhit (2025) affirm that Industry 4.0 technologies, including blockchain and digital twins, have the potential to address the fragmentation of the halal meat supply chain, which has long been vulnerable to information manipulation and fraud. Such integration aligns with the spirit of wholeness in Auda's (2008) thinking, in which halal compliance cannot merely be verified at a single point, but must be maintained in its entirety throughout the value chain.

Third, the feature of openness in Auda's (2008) view asserts that the Islamic legal system is open to knowledge, culture, and the context of the times, including technological development. This openness is clearly reflected in the growing trend of research on halal industry digitalization. Dupi and Baloch's (2025) bibliometric study shows that the focus of research has shifted from conventional certification and food safety issues toward the exploration of cutting-edge technologies such as blockchain and machine learning, with Indonesia and Malaysia as the epicenters of research contribution. This shift confirms that the halal ecosystem, like the Islamic legal system in Auda's (2008) view, is adaptive and does not close itself off from contemporary scientific and technological developments, so long as those developments remain directed toward strengthening *masalah*.

Fourth, hierarchy with purposefulness in Auda's (2008) framework emphasizes the importance of dynamically prioritizing among *dharuriyat* (essential), *hajiyyat* (needed), and *tahsiniyat* (complementary) maqasid according to context. In practice, the findings of Qizam, Berakon, and Ali (2025) show that the halal value chain acts as a mediating variable connecting sharia financial inclusion and the digital economy with the socio-economic transformation of Islamic boarding schools (*pesantren*), indicating that strengthening the economic capacity of the community (falling under the *hajiyyat*–*tahsiniyat* category) is also supported by strengthening the basic infrastructure of the halal value chain (falling under the *dharuriyat* category). Nevertheless, Harsanto, Pradana, Firmansyah, Apriliadi, and Farras (2024) find that research and development (R&D) factors have an insignificant effect on the performance of halal value chain MSMEs, whereas the core elements of the halal value chain itself have a significant effect. This finding indicates a priority imbalance in the field, where digital investment is often concentrated on surface-level aspects (*tahsiniyat*) without first

addressing basic needs (*dharuriyat*) such as literacy and infrastructure, meaning the hierarchy of *maqasid* has not yet been proportionally arranged.

Fifth, the feature of multidimensionality asserts that *maqasid sharia* cannot be reduced to a single dimension, such as the economic dimension, but must simultaneously encompass social, environmental, and spiritual dimensions (Auda, 2008). Sarasi, Yunizar, and Satmoko (2025), in their evaluation of halal supply chain management performance in the culinary sector, show that operational efficiency must be balanced with sustainability and social responsibility, rather than being driven solely by profit orientation. Similarly, Darmawan, Alhifni, and Rahman's (2024) research on the transformation of the Indonesian halal industry emphasizes that global market competitiveness must be built on a foundation of multidimensional sustainability, encompassing economic, social, and governance aspects, in line with the principle of *sharia economic maqasid* that positions balance as a core value (Mufid, 2023).

Sixth, purposefulness, as the culminating feature of Auda's (2008) system, asserts that every *sharia* provision, including in the economic domain, must always be directed toward its highest objective comprehensive human *maslahah* rather than stopping at mere formal legality. This feature serves as an important critique of the tendency within parts of the industry to treat halal certification and traceability technology merely as instruments of administrative compliance or marketing strategy (Adinugraha, Fikri, & Andrean, 2024), without genuine internalization of the more substantive objectives of *sharia*. Research by Musarrofa and Muttaqin (2024) and Al-Turabi and Auda (2025) affirms that Auda's systems approach is relevant across contemporary fields of Islamic law, including in responding to social change driven by digital technology, because it is able to maintain purposefulness amid the dynamics of changing forms and instruments. In line with this, Alias, Abdullah, Osman, Ismail, and Kamis (2025) affirm that *maqasid* must be positioned as an active source of law that guides the application of *sharia* provisions to contemporary issues, including digital transformation.

Based on the synthesis of these six features, it can be concluded that digital transformation in the halal value chain has great potential to strengthen the achievement of *maqasid sharia*, particularly in terms of transparency, traceability, and the efficient distribution of *maslahah* to the public. However, this potential can only be optimally realized if the design of digital technology and policy attends to the balance of priority hierarchy, multidimensional engagement, and clear purposefulness, rather than merely pursuing administrative efficiency and market competitiveness. Failure to integrate these six systemic features risks turning halal value chain digital transformation into a technocratic project that loses its *maqasid* spirit.

This synthesis also reveals a gap between the maturity of technical research and the maturity of philosophical research in halal value chain studies. Most of the literature reviewed for example, the studies by Harsanto, Farras, Firmansyah, Pradana, and Apriliadi (2024) and Ellahi, Wood, Khan, and Bekhit (2025) focuses on the technical feasibility and operational benefits of digital technology, without extensively and explicitly connecting them to the *maqasid* framework as a benchmark of success. In fact, as emphasized by Mufid (2023), *sharia economic maqasid* should serve as the primary evaluative parameter for assessing the success of an Islamic economic policy or innovation, including digital technology-based innovation, rather than relying merely on financial indicators or efficiency alone. This gap underscores the urgency of more intensive interdisciplinary dialogue between halal supply chain technology

experts and maqasid sharia experts, so that technological development does not become detached from its ethical-philosophical foundation.

The practical implication of this synthesis is the need for a policy framework that explicitly integrates maqasid indicators into the design of halal value chain digitalization programs for example, by ensuring equitable technology access for MSMEs (the dharuriyat and hajiyyat dimensions), promoting interoperability of traceability systems across certification bodies (the wholeness dimension), and creating space for continuous evaluation of the social and environmental impacts of technology adoption (the multidimensionality dimension). In line with the views of Al-Turabi and Auda (2025), the maqasid systems approach can serve as an instrument of policy reform that is responsive to contemporary social transformation, including transformation driven by digital technology, so that future halal value chain policy is oriented not only toward market growth, but also toward the sustainability of *maslahah* for all stakeholders.

CONCLUSION

This literature study shows that the maqasid al-shariah systems approach developed by Auda (2008) is relevant for use as an analytical framework for reading the phenomenon of digital transformation in the halal value chain. The six systemic features cognition, wholeness, openness, hierarchy with purposefulness, multidimensionality, and purposefulness prove capable of comprehensively mapping both the contributions and the risks of digitalization to the achievement of maqasid sharia. The literature synthesis shows that digital technologies such as blockchain, artificial intelligence, and traceability systems (Harsanto et al., 2024; Ellahi et al., 2025) have the potential to strengthen the transparency and integration of the halal value chain, but these benefits have not yet been evenly distributed due to gaps in digital literacy and infrastructure among MSME actors (Adinugraha, Fikri, & Andrian, 2024), and have not yet been fully directed toward the essential objectives of maqasid (Mufid, 2023).

The main contribution of this article is to reintroduce the philosophical-ethical dimension of maqasid sharia as an evaluative parameter for halal value chain digital transformation, a subject that has so far been studied mostly through a technical-instrumental supply chain management approach (Harsanto, Pradana, Firmansyah, Apriliadi, & Farras, 2024; Sarasi, Yunizar, & Satmoko, 2025). The practical implication is that policymakers and halal industry actors need to design digitalization strategies that are not only oriented toward efficiency and market competitiveness, but that also explicitly consider equitable access, cross-institutional integration, and multidimensional sustainability, as emphasized in Auda's (2008) systems framework.

This study has limitations in that it is a purely library-based study without empirical field data, so the theoretical propositions constructed need to be further tested through quantitative or qualitative research in specific halal industry contexts. Future research is recommended to develop measurement instruments based on maqasid indicators to assess the performance of halal value chain digital transformation in a more measurable and applicable manner.

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