

## ***Epistemological Integration of Uṣūl Fiqh and Blockchain: A Philosophical Approach to Digital Islamic Economic Ijtihad***

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### **Abstract**

*This study integrates the epistemology of uṣūl al-fiqh with blockchain ontology to formulate a digital ijthād-maqāṣidī model relevant to the digital Islamic economy. The problem examined: how to develop an istinbāṭ methodology that is able to read and design laws in a blockchain algorithmic system? The novelty of this research lies in the combination of maqāṣid-driven ijthād with technological architecture (smart contracts, digital identity, governance), a philosophical approach that has never been formulated systematically. The methods used are multi-methodological philosophical-normative: ontological analysis of technology, uṣhulī hermeneutics on nash and rules, and conceptual synthesis validated through thought experiments and expert panels; Data are derived from selected literature, fatwas, whitepapers, and case studies. The findings show three operational pillars (sharia design thinking; maqāṣid-guided algorithmic ethics; qawā'id-based smart contracts) that enable the instilling of sharia values in system design. Implications: ijthād becomes a proactive digital legal design tool and guideline for fatwas, regulators, and sharia fintech developers.*

**Keywords:** Algorithmic Ethics, System Design, Legal Transformation.

### **Abstrak**

Penelitian ini mengintegrasikan epistemologi *uṣūl al-fiqh* dengan ontologi *blockchain* untuk merumuskan model *ijthād digital-maqāṣidī* yang relevan bagi pengembangan ekonomi Islam digital. Permasalahan yang dikaji adalah bagaimana merumuskan metodologi *istinbāṭ* yang mampu membaca sekaligus merancang hukum dalam sistem algoritmik *blockchain*. Keunikan penelitian ini terletak pada penggabungan *ijthād* berbasis maqāṣid dengan arsitektur teknologi (seperti *smart contract*, identitas digital, dan *governance*), yaitu suatu pendekatan filosofis yang belum pernah dirumuskan secara sistematis sebelumnya. Metode yang digunakan bersifat filosofis-normatif dengan pendekatan multi-metode: analisis ontologis terhadap teknologi, hermeneutika *uṣhulī* atas nash dan kaidah, serta sintesis konseptual yang divalidasi melalui *thought experiment* dan panel ahli. Data bersumber dari literatur terpilih, fatwa, *whitepaper*, dan studi kasus. Temuan penelitian menunjukkan tiga pilar operasional: *design thinking* syariah, etika algoritmik berbasis maqāṣid, dan *smart contract* berbasis qawā'id yang memungkinkan penanaman nilai-nilai syariah secara melekat dalam desain sistem. Implikasinya, *ijthād* berfungsi sebagai instrumen proaktif dalam desain hukum digital sekaligus menjadi pedoman bagi lembaga fatwa, regulator, dan pengembang *fintech* syariah.

**Kata Kunci:** Etika Algoritmik, Desain Sistem, Transformasi Hukum.

## A. Introduction

In the past decade, the global digital economy has experienced a transformational leap due to technological disruption, particularly through the presence of blockchain, which promises a trustless trust-based decentralized system.<sup>1</sup> This phenomenon not only changes the pattern of conventional transactions, but also challenges the normative structure of the Islamic financial system which has been dependent on the validation of central actors and institutional authorities in determining the validity of contracts and legal mechanisms.<sup>2</sup> While the conventional financial ecosystem has begun to respond to this technology through *smart contracts*, *Decentralized Finance (DeFi)*, and *asset tokenization*, the contemporary Islamic legal literature instead shows an epistemological vacuum in formulating *ijtihad* tools that are able to facilitate shari'a validation of this digital transformation.<sup>3</sup> For example, the implementation of sharia contracts such as *murabahah*, *wakalah*, and *sukūk* is blockchain-based.<sup>4</sup> Until now, it has not had an established legitimacy of *istinbat* within the framework of *classical and modern ushul al-fiqh*.

One of the fundamental challenges is the gap between the nash-based epistemology of *ushūl al-fiqh* (text) and the contextualization of law in digital reality that is non-physical, encrypted, and distributed *ledger*. Blockchain technology urges the construction of a new *ijtihad* approach that is not only textual (*bayani*), but also epistemological, rational, and adaptive to digital complexity. Cutting-edge studies such as Mohd Fauzi Abu-Husin et al. It shows that the integration of sharia and blockchain is still normative-descriptive without a solid methodological framework.<sup>5</sup> Likewise, Habib Ahmed emphasized the absence of *fiqh* methodology in responding to the tokenization of sharia assets completely.<sup>6</sup> Meanwhile, Younes Soualhi and Abdulmajid Obaid Hasan Saleh mentioned the need for an ethical and

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<sup>1</sup> Magda Pineda, Daladier Jabba, and Wilson Nieto-Bernal, "Blockchain Architectures for the Digital Economy: Trends and Opportunities," *Sustainability* 16, no. 1 (January 4, 2024): 442.

<sup>2</sup> Jie Zhang and Chen Ruan, "Blockchain Technology and Corporate Performance: Empirical Evidence from Listed Companies in China," *Sustainability* 16, no. 21 (October 23, 2024): 9177.

<sup>3</sup> Matteo Aquilina, Jon Frost, and Andreas Schrimpf, "Decentralized Finance (DeFi): A Functional Approach," *Journal of Financial Regulation* 10, no. 1 (March 15, 2024): 1–27, <https://doi.org/10.1093/jfr/fjad013>; Iwa Salami, "Challenges and Approaches to Regulating Decentralized Finance," *AJIL Unbound* 115 (December 6, 2021): 425–29.

<sup>4</sup> Omar Alaeddin, Mohanad Al Dakash, and Tawfik Azrak, "Implementing the Blockchain Technology in Islamic Financial Industry: Opportunities and Challenges," *Journal of Information Technology Management* 13, no. 3 (2021): 99–115, <https://doi.org/10.22059/JITM.2021.83116>; Nida Khan et al., "Tokenization of Sukuk: Ethereum Case Study," *Global Finance Journal* 51 (February 2022): 100539.

<sup>5</sup> Mohd Fauzi Abu-Husin et al., "Research Trend in Islamic Financial Technology and Blockchain: A Bibliometric Analysis," *Malaysian Journal of Syariah and Law* 13, no. 1 (April 30, 2025): 147–63.

<sup>6</sup> Habib Ahmed, "Security Tokens, Ecosystems and Financial Inclusion: Islamic Perspectives," *International Journal of Islamic and Middle Eastern Finance and Management* 17, no. 4 (July 31, 2024): 730–45.

normative approach in designing "*sharia-compliant smart contracts*", but have not yet touched the ontological and epistemic areas of Islamic law.<sup>7</sup>

The emptiness raises a fundamental question: *How can the epistemology of ushul fiqh integrate the structure and mechanism of blockchain into the ijihad framework of Islamic law?* What is the philosophical approach that can formulate digital ontology and normative epistemology in the formulation of ijihad of sharia economics? This study aims to develop a conceptual model based on integration between the epistemology of ushul fiqh and blockchain technology through a normative, ontological, and methodological philosophical approach. Thus, ijihad is no longer limited to legal adjustments to new realities, but becomes a creative process in forming a framework of sharia digital justice based on *maqāsid al-shari'ah*.

This article makes an original contribution to the development of *istinbāt* methodology of Islamic law, in particular by offering a *value-driven and technology-driven digital ijihad* framework. The main novelty of this study lies in the attempt to integrate *the theory of ijihad maqāsidī* and the logical structure of blockchain through a philosophical approach that has not been systematically raised in previous studies. If previous research such as by Sheikh Inam Ul Mansoor (2025) only emphasizes the ethical compatibility between technology and sharia law,<sup>8</sup> This article therefore goes further by building an ontological-epistemological framework of ijihad, including the redefinition of 'illah, *maqāsid*, and qiyās in the digital realm.

From the above explanation, this research is not only academically relevant as a development of contemporary Islamic legal theory, but also strategic in supporting the *sharia architecture of digital finance* in the blockchain era. The proposed formulation of the digital ijihad model is expected to be a normative and practical reference for fatwa authorities, sharia regulators, and Islamic financial technology developers who are committed to the principles of *maqāsid*, justice, and digital transparency.

## B. Research Method

This study employs a philosophical–normative approach supported by a qualitative multi-method design to formulate a conceptual yet practically testable framework of digital *ijihad*. Operationally, the method integrates three analytical orientations: (i) Ontological analysis of blockchain characteristics decentralization, immutability, and verifiability—based on literature in philosophy of technology and information ontology; (ii) Uṣuli epistemological

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<sup>7</sup> Younes Soualhi and Abdulmajid Obaid Hasan Saleh, "Smart Contracts and the Prospects for Their Application in Social Banking: A Maqasid Jurisprudential Vision," *Malaysian Journal of Syariah and Law* 12, no. 2 (August 31, 2024): 490–510, <https://doi.org/10.33102/mjssl.vol12no2.599>.

<sup>8</sup> Sheikh Inam Ul Mansoor, "Islamic Law in the Age of Blockchain: Exploring Shari'ah Compliant Cryptocurrencies and Digital Assets," *Manchester Journal of Transnational Islamic Law & Practice* 21, no. 1 (2025): 269–91.

analysis through hermeneutic examination of *naṣṣ*, legal maxims, and classical–contemporary *maqāṣid* works to derive underlying value principles; and (iii) Analytic–conceptual synthesis that unifies both domains into a three-pillar model consisting of *sharia design thinking*, *maqāṣid-guided algorithmic ethics*, and *qawaʿid*-based smart contracts. Data sources include Scopus-indexed publications (2015–2025), selected academic journals, fatwas and regulatory documents (e.g., DSN-MUI), technical whitepapers, and case studies such as sharia crowdfunding, automated zakat, and halal audit ledgers. Analysis proceeds through sequential stages: literature mapping, identification of epistemological gaps, model formulation, and conceptual testing via thought experiments and case-based triangulation. Initial validation is conducted through structured consultation with cross-disciplinary experts—*uṣul/maqāṣid* scholars, fatwa authorities, blockchain developers, and regulators. Methodological limitations (e.g., absence of quantitative empirical testing and limited AI/IoT scope) are acknowledged for future research development.

## C. Result And Discussion

### 1. The Ontological Character of Blockchain Technology

Blockchain technology is not just a technical instrument, but an ontological entity that has its own metaphysical structure. In the study of technology philosophy, blockchain represents an information system that is no longer *decentralized*, *immutability*, and can be *collectively* verifiable.<sup>9</sup> These three characters form a *digital ontology* that is different from traditional legal and economic systems, including in the context of Islamic law. Philosophically, blockchain ontology shifts the trust center from external authorities, such as states, financial institutions, or even muftis into open, distributed algorithmic code and consensus mechanisms. Thus, blockchain gives rise to *trustless trust*: trust without trusted agents, which rely on transparency and cryptography, rather than personal or institutional authority.<sup>10</sup> In this framework, blockchain is *non-personal*, *self-executing*, and *rule-bound by code*, a character that contains new legal and ethical dimensions that need to be studied from a sharia perspective.<sup>11</sup>

When analyzed conceptually, the character of *decentralization* in blockchain is in line with the principle of justice (*ʿadl*) in Islam, in the sense of a distribution of authority

<sup>9</sup> Dion Curry, “Limitations Of Trust and Legitimacy in Blockchain: Exploring the Effectiveness of Decentralisation, Immutability and Consensus Mechanisms in Blockchain Governance,” *International Journal of Public Sector Management* 38, no. 1 (January 2, 2025): 98–117, <https://doi.org/10.1108/IJPSM-12-2023-0368>.

<sup>10</sup> Badr Bellaj et al., “BTrust: A New Blockchain-Based Trust Management Protocol for Resource Sharing,” *Journal of Network and Systems Management* 30, no. 4 (October 28, 2022): 64.

<sup>11</sup> Aquilina, Frost, and Schimpf, “Decentralized Finance (DeFi): A Functional Approach”; Wei Liang et al., “On Identity, Transaction, and Smart Contract Privacy on Permissioned and Permissionless Blockchain: A Comprehensive Survey,” *ACM Computing Surveys* 56, no. 12 (December 31, 2024): 1–35.

that avoids the concentration of power and the potential for tyranny.<sup>12</sup> Decentralization puts all system actors in an equal position as verifiers and recorders of transactions, reducing the risk of structural exploitation and information asymmetry.<sup>13</sup> Meanwhile, *immutability* or immutability of data in blockchain, ethically supports the principle of *trust* in Islam, which is a guarantee of the integrity and authenticity of transaction information, something that is crucial in the determination of contracts and ownership rights.<sup>14</sup> Verifiability is the ability of all parties to verify data transparently and correspond directly with the principle of *maslahah* (benefit) in *maqāṣid al-sharia*,<sup>15</sup> Because it encourages transparency, information disclosure, and accountability in muamalah contracts.

However, blockchain ontology also challenges the dimension of *syakhsyiyah* (Islamic legal personality), which has been presuming the role of human actors in contracts.<sup>16</sup> Blockchain systems based on *smart contracts and automation can obscure individual moral accountability, because code replaces intent, and algorithms replace effort*.<sup>17</sup> In this context, sharia principles such as *qaṣd al-'āqid* (intention of the contractor), *al-riḍā*, and *ḥukm al-'āqil* require reinterpretation in a non-anthropological legal system.<sup>18</sup> Thus, although blockchain is structurally compatible with sharia values, epistemic integration between technology and fiqh is not enough just through formal analogies, but rather requires a philosophical foundation that is able to mediate between digital codification and sharia principles.

In conclusion, the ontological character of blockchain presents great opportunities for the transformation of the Islamic financial system that is more transparent, fair, and efficient. However, this opportunity can only be used legitimately and validly if it is supported by an adaptive construction of *ijtihad* epistemology, based on *maqāṣid* and values, and able to navigate the boundaries between codes and norms, between

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<sup>12</sup> Mansoor, "Islamic Law in the Age of Blockchain: Exploring Shari'ah Compliant Cryptocurrencies and Digital Assets," 2025.

<sup>13</sup> Curry, "Limitations Of Trust and Legitimacy in Blockchain: Exploring the Effectiveness of Decentralisation, Immutability and Consensus Mechanisms in Blockchain Governance."

<sup>14</sup> Ghassan Adhab Atiyah et al., "Legitimacy of Smart Contracts from the Perspective of Islamic Law: A Case Study of Blockchain Transactions," *Al-Istinbath: Jurnal Hukum Islam* 9, no. 1 (May 30, 2024): 155.

<sup>15</sup> Muh. Nashirudin, Ramadhan, and Almira Keumala Ulfah, "Strengthening Maqāṣid Al-Shari'ah Values in Halal Traceability: Evidence and Analysis of Block Chain Based on Halal Supply Chain Applications," *Al-Manahij: Jurnal Kajian Hukum Islam* 18, no. 1 (May 14, 2024): 95–108.

<sup>16</sup> Jon Truby, Andrew Dahdal, and Otabek Ismailov, "The Role and Potential of Blockchain Technology in Islamic Finance," *European Business Law Review* 33, no. Issue 2 (April 1, 2022): 175–92.

<sup>17</sup> Atiyah et al., "Legitimacy of Smart Contracts from the Perspective of Islamic Law: A Case Study of Blockchain Transactions";

<sup>18</sup> Azlin Alisa Ahmad, Mat Noor Mat Zain, and Nur Diyana Amanina Zakaria, "The Position of Smart Contracts in the Light of Islamic Contract Theory," *Samarah: Jurnal Hukum Keluarga Dan Hukum Islam* 8, no. 1 (January 27, 2024): 144–71, <https://doi.org/10.22373/sjhk.v8i1.16372>.

algorithmic contracts and divine ethics. This is where the importance of reconstructing *the istinbāt* method based on wisdom and *maqāṣid* to bridge the ontology of technology with the normative structure of Islamic law.

## 2. The Epistemology of Ushul Fiqh and Its Implications for Technology

Classical ushul al-fiqh *epistemology* is built on a hierarchical structure that places *nass* (text) as the primary authoritative source, followed by derivative instruments such as *qiyās*, *ijmā'*, and *istihsān* that serve as a bridge between text and reality.<sup>19</sup> In this structure, the validity of the law depends on the power of *the illah* and its relation to *the ḥukm* in the case of origin and branch.<sup>20</sup> However, the contemporary reality characterized by the presence of digital technologies such as blockchain challenges the validity of such structures, in particular due to the changing nature of legal objects, transaction actors, and even contractual mediums (from physical to digital).<sup>21</sup> Therefore, it is necessary to carry out epistemological revisions so that the *ijtihād* apparatus can respond to new situations without losing the legitimacy of *shari'i*. This is where the relevance of *the maqāṣidiyyah approach* and the theory of *naẓariyyāt al-wasa'il* becomes central.

*Naẓariyyat al-wasa'il* is a theory in ushul fiqh that places means (*wasilah*) as an integral part of the achievement of legal goals (*maqāṣid*). According to Al-Shaṭībī and al-Raysūnī, a *wasilah* has a legal status that follows its main purpose, so the development of technology as a new means of transaction must be judged based on its ability and contribution to the achievement of *maqāṣid*, such as *ḥifẓ al-mal*, *ḥifẓ al-'ird*, and *ḥifẓ al-din*.<sup>22</sup> In this context, blockchain technology is not only a neutral instrument, but a legal means that must be understood in the relationship of values, ethics, and sharia authority. When *smart contracts*, cryptographic verification, and ledger systems are used to facilitate Islamic financial transactions, the legal question that arises is not simply "is this in accordance with the form of the contract in fiqh?", but "does this guarantee *the maqāṣid* that the sharia wants?"

The *implications* of this framework demand an expansion of the epistemic model of *istinbāt*. If in the classical structure the *flow of istinbāt* runs from *nass* → *qiyās* →

<sup>19</sup> Muhammad Nazir Alias et al., "The Position of Maqasid Al-Shariah within Islamic Legal Sources: A Comprehensive Analysis," *Samarah* 9, no. 2 (2025): 937–64, <https://doi.org/10.22373/q4byre51>.

<sup>20</sup> Khairuddin Hasballah et al., "Identifying 'Illat through Munasabah in Islamic Law: A Perspective of Imam Al-Ghazali," *Samarah: Jurnal Hukum Keluarga Dan Hukum Islam* 5, no. 2 (December 26, 2021): 598,

<sup>21</sup> Pierangelo Blandino, "Ricoeur's Intersection and the Harmonisation of Law and Algorithms," *International Journal for the Semiotics of Law - Revue Internationale de Sémiotique Juridique*, August 2, 2025,

<sup>22</sup> Ahmad Al-Raisūnī, *Naẓariyyah Al-Maqāṣid 'inda Al-Imām Al-Syāṭībī* (Herndon, Virginia: al-Ma'had al-'Alami li-al-Fikr al-Islami, 1995). 147.

*maslahah*, then in contemporary *maqāṣid* epistemology, the flow needs to be expanded to:

*nass* → *qiyās* → *maslahah* → *maqāṣid* → *istislāḥ mustanīr*.

*Istislāḥ mustanīr* (enlightened *maslahah*) is a term that refers to a *maslahah* that is not only utilitarian, but also informed by normative values, technological ethics, and social rationality.<sup>23</sup> In other words, law is not only established on the basis of analogy with the law of origin (*qiyās*), but through a synthesis between texts, contexts, and values, thus allowing the structure of Islamic law to evolve along with the structure of the digital world.

For example, in *blockchain-based* sukuk transactions, *wakālah* and *ijārah* contracts can be programmed as *smart contracts*, but the validity of the sharia does not only depend on the form of a formal contract, but on *maqāṣid guarantees* such as clarity of rights, fairness of risk distribution, and investor protection.<sup>24</sup> This suggests that classical ushul tools such as *sadd al-dzarī'ah*, *istiḥsān*, and *istislāḥ* need to be reconstructed in order to function in a code-based system, not just conventional social relations. Therefore, the epistemology of ushul fiqh cannot be stagnant in *the bayani* state, but must move towards *maqāṣidī*, even *ijtihād istishlahi mustanir*, which is able to present divine norms in modern digital architecture.

It can be understood that the integration of ushul fiqh epistemology with technology is not only possible, but urgent. It opens up space for *ijtihād mu'assas* that does not depart solely from the text, but builds a legal structure based on *the values of maqāṣid* and the systemic rationality of technology itself. This is not just a response to the changing times, but an affirmation that sharia is dynamic, responsive, and visionary when associated with the value of justice and the benefit of the ummah in the digital era.

### 3. Ontological-Methodological Approach in the Formulation of Digital Ijtihad

The transformation of the digital economy, which is marked by the rise of technology-based transactions such as *smart contracts*, *asset tokenization*, and *blockchain-based ledgers*, has given birth to a new ontology in the muamalah system.<sup>25</sup>

<sup>23</sup> Saifuddin Sa'dan et al., "Imkāniyāt Al-Ijtihād Al-Istislāḥī Wa Ishāmātuhu Li Hall Al-Qadhāyā Al-Fiqhiyyah Al-Mu'āṣarah: Dirāsāt Fī Fatāwā Jā'ihah Covid Fī Indonesia," *Jurnal Ilmiah Islam Futura* 24, no. 1 (February 2, 2024): 198, <https://doi.org/10.22373/jiif.v24i1.14967>.

<sup>24</sup> Saheed Abdullahi Busari and Sikiru Olanrewaju Aminu, "Application of Blockchain Information Technology in Ṣukūk Trade," *Journal of Islamic Accounting and Business Research* 13, no. 1 (January 3, 2022): 1–15.

<sup>25</sup> Soualhi and Hasan Saleh, "Smart Contracts and the Prospects for Their Application in Social Banking: A Maqasid Jurisprudential Vision," August 31, 2024; Truby, Dahdal, and Ismailov, "The Role and Potential of Blockchain Technology in Islamic Finance."

As Luciano Floridi points out, this ontology no longer rests on visible physical entities, directly interacting human actors, or conventional transaction documents, but on digital systems that are non-material, encrypted, and executed automatically by algorithmic logic.<sup>26</sup> This shifts the basis of reality on which Islamic law has been based. In this new ontology, the reality of transactions is no longer something that is empirically "visible", but rather digitally "verified" through hash systems, consensus, and code.<sup>27</sup> Therefore, any attempt at *ijtihād* against this kind of entity demands a shift from an analogous-formal framework to a more ontological and systemic approach.

To answer these challenges, it is necessary to reconstruct the methodology of *istinbāṭ* Islamic law from the old paradigm to the new framework. In the traditional scheme, *the istinbāṭ* method is rooted in *fiqh al-nass*, which is a model of direct deduction from the sacred text into practical law through the device of *qiyās*, *ijmā'*, and the rules of *uṣūl*.<sup>28</sup> As social complexity develops, the *fiqh al-wāqī'* approach emerges, which is *ijtihād* based on social reality that prioritizes context observation and *maṣlahah* analysis.<sup>29</sup> However, in this digital era, *fiqh al-wāqī'* alone is not enough, because the reality has not only changed, but structurally has undergone *ontological disruption*. This is where the need for *fiqh al-taṭawwūr* was born, which is a legal approach based on the dynamics of technological evolution and fundamental changes in the structure of human life.<sup>30</sup> *Fiqh al-taṭawwūr* is not just an adaptation, but a methodology that makes technological complexity a new normative parameter in the formation of law.

This approach emphasizes the necessity of *ijtihād mu'assas* an *ijtihād* grounded in legal values, systemic coherence, and philosophical structures aimed not only at literal legal legitimacy but also at rationality and meaningfulness within emerging ecosystems. In the blockchain context, *ijtihād* must go beyond assessing the permissibility of contractual forms to examining the ontology of digital transactions, algorithmic trust mechanisms, and their ethical implications. Smart contracts, for example, require a redefinition of *shurūṭ al-'aqd*, *qaṣd al-'āqid*, and *taṣarrufāt al-mukallaḥīn*, given the

<sup>26</sup> Luciano Floridi, "Against Digital Ontology," *Synthese* 168, no. 1 (May 1, 2009): 151–78, h

<sup>27</sup> Mansoor, "Islamic Law in the Age of Blockchain: Exploring Shari'ah Compliant Cryptocurrencies and Digital Assets," 2025.

<sup>28</sup> Ahmad Yani Anshori and Landy Trisna Abdurrahman, "History of the Development of Mazhab, Fiqh and Uṣūl Al-Fiqh: Reasoning Methodology in Islamic Law," *Samarah: Jurnal Hukum Keluarga Dan Hukum Islam* Volume 9, no. 1 (2025): 273–98.

<sup>29</sup> Şuhaib Salīm Samīr Al-Ālūsī, "Fiqh Al-Wāqī' Wa Aṣaruhu Fī Al-Aḥkām Al-Syar'Iyyah," *Majallah Kulliyah Al-Yarmūk* 18, no. 5 (2022): 1053–1109.

<sup>30</sup> Muhammad Safwan Harun et al., "The Concept of Al-Thawābit and Al-Mutaghayyirāt in Technological Innovation According to Maqāṣid Al-Sharī'ah," *Millah: Journal of Religious Studies* 24, no. 2 (August 30, 2025): 573–610.

absence of direct human volition in contract execution. Thus, *ijtihād* must be rooted in a deep understanding of the digital logic and structural architecture that shape legal relations.<sup>31</sup>

Furthermore, the ontological–methodological approach enables an Islamic legal epistemology that is not merely reactive to technological change but proactively shapes future legal norms. In this framework, *maqāṣid al-shari‘ah* serve as ontological principles guiding human engagement with digital systems. *Ḥifẓ al-māl*, for instance, requires the protection of globally distributed digital assets, while *ḥifẓ al-‘aql* entails safeguarding against algorithmic manipulation and data exploitation in automated environments. Accordingly, integrating digital ontology with *uṣūl al-fiqh* methodology is not a theoretical luxury but an epistemic imperative for ensuring the continued relevance of Islamic law in high-tech landscapes. *Ijtihād mu‘assas*, grounded in technological complexity, becomes a methodological necessity for sustaining a living, adaptive, and directive Islamic legal framework in a future shaped by algorithms, data, and networks.

#### 4. Integration of Ushul Fiqh Epistemology and Blockchain

The integration between the epistemology of *ushul al-fiqh* and blockchain technology cannot be done partially or symbolically, but requires a conceptual framework capable of bringing together the normative values of Islamic law with the structure of an autonomous, decentralized, and code-based digital system. Blockchain as a *trustless trust system* challenges traditional legal foundations that are grounded in actors, institutions, and authoritative structures.<sup>32</sup> Therefore, a *systemic and integrative* sharia digital *ijtihād* model is needed that combines *maqāṣid*, *qawā‘id fiqhiyyah*, and *maslahah* with the main components in blockchain architecture: *digital identity*, *smart contracts*, and *governance protocols*.

*First*, integrating *maqāṣid al-shari‘ah* with digital identity is central in a digital Islamic legal framework. In blockchain ecosystems, digital identity underpins authentication, asset management, and rights obligations tracking. From a sharia perspective, identity systems must ensure *ḥifẓ al-nafs*, *ḥifẓ al-‘ird*, and *ḥifẓ al-mal* through privacy protection, abuse prevention, and equitable access. Thus, *maqāṣid* serve as ethical parameters that guide both the design and legitimacy of blockchain-based legal systems.

*Second*, *qawā‘id fiqhiyyah* can be embedded into smart contract logic as the basis for automated sharia-compliant contracting. Principles such as *al-yaqin la yazul bi al-*

<sup>31</sup> Liyakat Takim, “Islamic Law and the Neoijtihādist Phenomenon,” *Religions* 12, no. 1 (2021): 1–10,

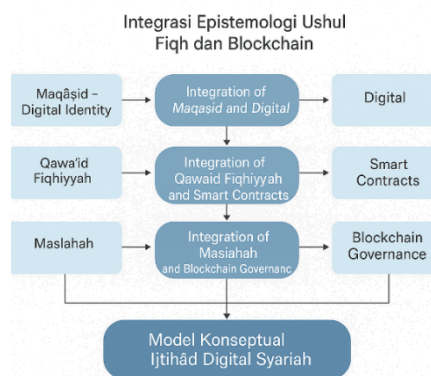
<sup>32</sup> Primavera De Filippi, Morshed Mannan, and Wessel Reijers, “Blockchain as a Confidence Machine: The Problem of Trust & Challenges of Governance,” *Technology in Society* 62 (August 2020): 101284,

*shakk*, *al-‘ādah muḥakkamah*, and *al-gharar mamnu‘* may be codified into contract parameters so that smart contracts satisfy both computational and sharia requirements. This enables *ta‘lil bi al-ḥikmah* in algorithmic structures, supported by the *istinbāt mustanīr* approach that aligns fiqh principles with algorithmic logic, allowing Islamic law to operate within non-anthropocentric systems.

Third, the concept of *maṣlahah* provides an ethical basis for blockchain governance, which relies on decentralized mechanisms such as PoW, PoS, BFT, node consensus, and smart voting. *Maṣlahah mursalah* becomes a criterion to assess whether governance models uphold stability, justice, inclusivity, transparency, and protection for vulnerable parties. Here, *maṣlahah* functions both as a sharia principle and a systemic value to prevent *mafsadah* and ensure equitable conduct in digital environments.<sup>33</sup>

This integrative model shows that the epistemology of ushul fiqh is not only compatible with blockchain technology, but has the capacity to *fill in ethical and normative structures* in digital systems. Through the integration of *maqāṣid–digital identity*, *qawā‘id fiqhiyyah–smart contracts*, and *maslahah-governance*, sharia digital ijthad can be reconstructed as *a process of istinbāt* value in information systems. This marks an important transition from legal product ijthad towards *system design ijthad*, i.e. from a fatwa on a contract to legal engineering in a blockchain architecture that upholds *maqāṣid al-sharia*.

#### Model “Ijthad Digital-Maqashidi



### 5. Application of the Model in the Case of the Sharia Digital Economy

The *previously formulated model of digital-maqāṣidī ijthād* is not a theoretical construct that only lives on paper. It is present as a real methodological offering, designed to answer new problems that arise in the midst of the rapid flow of digital transformation. In today's sharia economic landscape, various technological innovations have opened up

<sup>33</sup> Dewaya, “Innovation in Islamic Finance : Integrating Blockchain with Maqāṣid Al Sharī‘ah & Ḥifz Al Māl.”

great opportunities as well as new challenges and this is where this model shows its relevance. There are three cases that concretely show how the values of ushul fiqh, *maqāsid al-sharī'ah*, and technological principles can be integrated with each other: *blockchain-based sharia crowdfunding*, *automatic zakat through smart contracts*, and *ledger-based halal audits that cannot be manipulated*.

*First, Blockchain-Based Sharia Crowdfunding.* In the midst of limited access to conventional capital, many small and social enterprises are now turning to *crowdfunding platforms*. When *crowdfunding* is developed on blockchain technology, every transaction becomes transparent, permanently recorded, and searchable by anyone. For the sharia economy, this is ideal. But the question is: how do we ensure that such a scheme is in accordance with Islamic values? This is where the *digital ijtihād-maqāsidī* approach works. *Healthy crowdfunding* must bring the value of justice, blessings, and benefits. The contract system should be designed to avoid manipulation, speculation, and ambiguity.<sup>34</sup> The use of *smart contracts* can help ensure that, as long as the logic and code embedded in them represent the principles of fiqh: there is clarity of the contract, a valid agreement, and a fair distribution of risk.<sup>35</sup> So, *ijtihād* is not just about judging "halal or haram," but also designing the system so that it is *structurally sharia*.

*Second, Automatic Zakat Through Smart Contract.* Zakat is a social worship that connects personal wealth with the interests of the ummah. However, in practice, many obstacles arise: negligence, administrative complexity, even deliberate avoidance. Technology can simplify everything. When a person has reached *nisab*, the system automatically calculates, withdraws, and distributes their zakat according to validated digital data. No more delays or ambiguities. The *digital ijtiḥād-maqāsidī* model helps to ensure that such a system is not only efficient, but also worshipworthy. Automation does not mean eliminating intentions, but simplifying the process while maintaining the validity of shar'i.<sup>36</sup> *Smart contracts* that program zakat must adjust to fiqh principles about haul, nisab, and types of assets. Moreover, he must bring the spirit of *maslahah* by making it easier for the *muzakki*, and ensuring a fair distribution to the *mustahiq*. This is an example of how technology can realize *maqāsid* in the most concrete form.

<sup>34</sup> Muhsin Muhsin et al., "Adaptation of the Economic Order Quantity (EOQ) Model in the Perspective of Maqasid Shari'a," *Al-Adalah* 21, no. 2 (December 27, 2024): 479–506, <https://doi.org/10.24042/adalah.v21i2.26535>.

<sup>35</sup> Soualhi and Hasan Saleh, "Smart Contracts and the Prospects for Their Application in Social Banking: A Maqasid Jurisprudential Vision," August 31, 2024.

<sup>36</sup> Amelia Nur Natasha Nazeri et al., "Exploration of a New Zakat Management System Empowered by Blockchain Technology in Malaysia," *ISRA International Journal of Islamic Finance* 15, no. 4 (December 27, 2023): 127–47, <https://doi.org/10.55188/ijif.v15i4.568>.

*Third*, Halal Audit with Technology That Cannot be Manipulated. Muslim consumers' trust in the halalness of products often depends on the labels affixed to the packaging. But what if a digital system could prove halalness thoroughly, from upstream to downstream, without loopholes to falsify? Blockchain technology makes that possible. All process data, starting from materials, suppliers, production processes, distribution will be stored permanently and transparently. Cannot be changed by anyone.<sup>37</sup> The *digital ijtihād-maqāṣidī* model sees this as a great opportunity. With this approach, we are not only talking about formal compliance, but also systemic justice. Fiqh's principles of prohibition of *gharar* and *tadlīs* can be programmed into the audit system. *Maqāṣids* such as *ḥifẓ al-nafs* and *ḥifẓ al-dīn* became the moral foundation of this halal tracking system.<sup>38</sup> And in the end, Muslim consumers can get certainty and peace of mind, not because they believe in labels, but because the whole process is ethical, transparent, and verifiable.

From the three cases above, it is clear that technology is not an enemy to Islamic law, it is a *new medium* to realize sharia values in real life. However, for that to be possible, *ijtihād* is not enough just to read the text. He must read the system, understand the code, and design the structure. The *digital ijtihād-maqāṣidī* model places fiqh scholars not only as legal interpreters, but also as *system architects* who are able to present *maqāṣid al-sharia* in complex, automated, and decentralized technological design. With this approach, Islamic law no longer runs behind the times. Instead, he is present at the forefront, guiding the direction of innovation to stay on the path of values: justice, transparency, responsibility, and blessing.

#### D. Conclusion

The accelerating wave of digital transformation particularly through blockchain introduces new ontological and epistemological challenges for Islamic law. Addressing these shifts requires methodological renewal within *uṣul al-fiqh*, not merely adaptive but future-oriented. This study formulates a digital *ijtihād-maqāṣidī* framework that integrates *maqāṣid al-shari'ah* with technological structures such as smart contracts, digital identity systems, and decentralized governance. Through this synthesis, Islamic law is positioned not only as a response to novel digital transactions but as a normative foundation for designing fair, ethical, and value-driven digital systems. This approach pushes *uṣul al-fiqh* beyond classical *bayani*

<sup>37</sup> Nohman Khan et al., "Technological Innovation for Religious Compliance: A Framework for AI and Blockchain Implementation in Halal Food Supply Chains," *Journal of Islamic Marketing*, September 25, 2025, <https://doi.org/10.1108/JIMA-04-2025-0263>.

<sup>38</sup> Muhammad Muntasir Yakubu et al., "HalalChain: A Decentralized Blockchain Model for Enhanced Data Integrity, Real-Time Compliance, and Automated Verification in Halal Food Supply Chain," *Results in Engineering* 27 (September 2025): 106591, <https://doi.org/10.1016/j.rineng.2025.106591>.

*qiyasi* models toward a value-based epistemology suited for an algorithmic, data-centric environment.

The proposed *ijtihad* model offers both theoretical and practical significance: it broadens the contemporary scope of Islamic legal thought while providing guidance for fatwa development, Islamic finance innovation, and *maqāṣid*-aligned digital regulation. By integrating *qawā'id fiqhiyyah* with smart contracts, *maqāṣid* with algorithmic ethics, and *maṣlahah* with blockchain governance, this study demonstrates the constructive role of *sharī'ah* within the digital ecosystem. Ultimately, it marks a shift from law as product to law as system design where *ijtihad* becomes value-engineering and *sharī'ah* becomes the animating ethos of a just, beneficial, and ethically grounded digital future.

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