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The Halal Economy Governance Paradox in Indonesia: Between Market Ambition, Doctrinal Centralization, and Weak Regulatory-Technology Interoperability

[1]Rahmina Auliyah
[1]STAI Balai Selasa Pesisir Selatan, Indonesia
*Corresponding Author: rahmina.auliyah245@gmail.com

ABSTRACT : Indonesia aggressively positions itself as a global hub for the halal economy, launching national masterplans, halal industrial roadmaps, and sharia finance expansion policies. Yet, behind this ambition lies a governance paradox: halal-sharia legitimacy is highly centralized doctrinally through MUI and DSN-MUI fatwas, while regulatory-technology instruments that enable fast-cycle digital compliance remain weak. Classical theory frames fatwa as epistemically authoritative but non-binding, gaining legitimacy through social acceptance rather than legal coercion. In Indonesia, fatwa authority evolved into delegated upstream normative filters for financial product approval without direct statutory conversion into positive law. This model succeeded institutionally, but fintech, RegTech, AI screening, and blockchain audit demands expose a temporal and interoperability gap between market speed and deliberative fatwa issuance cycles. Comparative regulatory governance emphasizes risk-based orchestration and real-time validation engines, dimensions underexplored in Indonesia's halal economic regulation scholarship. The study affirms that Indonesia holds strong doctrinal authority yet lacks digital governance connectors, risking normative usability amid exponential halal market disruption. The paper proposes governance-oriented normative reconstruction that encodes legitimacy into verifiable, auditable, and digitally enforceable standards without eroding institutional autonomy.

KEYWORDS: Halal; Governance; Compliance; Fintech.

INTRODUCTION

Indonesia offers a compelling case in the global development of the halal economy: a country with vast market potential, strong institutionalized religious authority, and increasing regulatory reliance on fatwa guidance, yet facing growing structural constraints in digital governance interoperability. As the world's largest Muslim-majority nation by population, Indonesia has aggressively declared its aspiration to become a global hub for the halal industry and Islamic finance ecosystem. This ambition is reflected in national strategies such as the Masterplan for the Sharia Economy, the Halal Product

Assurance Law framework (UU No. 33/2014), and various policy roadmaps that position halal compliance as a source of national economic competitiveness rather than merely doctrinal affirmation (Komite Nasional Ekonomi dan Keuangan Syariah 2018; Feener 2013). However, Indonesia simultaneously embodies what scholars have described as a governance paradox: normative legitimacy is deeply centralized through collective, deliberative fatwa institutions such as MUI and DSN-MUI, while digital regulatory logistics and acceleration infrastructure remain underdeveloped (Hosen 2004; Hooker 2008).

In classical Islamic jurisprudence, the fatwa operates outside direct coercive power and serves as a non-binding moral and legal opinion grounded in epistemic legitimacy, scholarly integrity, and community trust rather than enforceable statutory sanction (Masud, Messick, and Powers 1996; Kamali 2003). Yet, Indonesia has developed a distinct trajectory diverging from this classical separation. Rather than remaining purely advisory, Indonesia's fatwas have evolved into normative upstream filters required before financial product legalization by regulators. This evolution does not represent statutory formalization but rather regulatory anchoring through institutional delegation of authority, soft coercive enforceability, and public legitimacy rationalization (Hosen 2007; Hosen 2004; Ichwan 2018). For example, Islamic banks and financial service providers depend on fatwa approval before receiving regulatory certification from Bank Indonesia or OJK, illustrating a governance stack where legality rests on regulatory authorization, but legitimacy is verified religiously upstream (Zulkifli 2012; Ascarya 2015; Hidayat 2016). This form of fatwa-dependent governance reflects what Hosen refers to as "constitutionalism without codification," a system where fatwa behavior influences policy direction without converting into enforceable state law as a separate legal source (Hosen 2007).

The centralization of halal authority is also historically rooted in Indonesia's Islamic legal politics. Hosen's ethnographic work on MUI shows that state actors increasingly treat fatwa as a behavioral standard, policy justification lens, compliance reference, and market-certification antecedent even when statutes do not formally embed it as positive law (Hosen 2004; Hosen 2007). Similarly, studies on DSN-MUI argue that fatwa authority has been strategically positioned as a governance source critical for product approval and compliance standard-setting in Islamic finance institutions (Ichwan 2013; Busyro 2017). Institutional authority is thus formally religious but operationally delegated by the state, enabling strong doctrinal consistency, public legitimacy, and industry trust.

However, Indonesia's halal governance model now faces unprecedented structural disruption. Since 2017, halal compliance is increasingly executed through digital platforms, algorithmic product screening, machine-driven financing workflows, crowd-sourced financing models, AI-led compliance detection, smart contract execution environments, and blockchain audit traceability systems, governance domains that call for real-time enforceability, digital auditability, and acceleration equivalence that fatwa institutions were never constructed to provide (Billah 2019; Muneeza 2020; Zulkarnain 2020). Unlike traditional Sharia financial institutions that historically operated within long-cycle regulatory adaptation and institutional review processes, fintech platforms manage transactions at distribution speed, producing governance demands that operate not at moral-norm pace but at platform-temporality pace (Black 2011; Black 2008). This creates a temporal mismatch problem, where fatwa issuance operates collectively and deliberatively, while market validation and regulatory compliance demand instant governance verification.

Comparative literature on regulatory governance demonstrates how modern regulatory states increasingly abandon statutory primacy alone in favor of responsive regulation, hybrid institutional authority, delegated compliance engines, and technology-legitimated audit infrastructures where regulation operates through orchestration engines, not merely doctrine or advice (Black, Baldwin, and Cave 2008; Mashaw 2010). Regulatory orchestration frameworks treat law not only as a normative instrument but as a technical-governance resource capable of being validated by technology, audited by data trails, enforced by automation, and operationalized by multi-actor compliance engines (Black 2008; Black 2011). Conversely, halal governance scholarship in Indonesia disproportionately centers doctrinal-centralization questions or sociological legitimacy, while RegTech, smart auditing enforceability, or AI-verifiable regulatory instrument design remains peripheral scholarly terrain (Hosen 2004; Hooker 2008; Feener 2013; Ichwan 2018). This analytical gap forms a critical problem not merely for academic theorizing but for national leadership in the halal governance supply chain.

Studies on Islamic finance compliance in digital markets argue that platform-based halal governance must emphasize velocity equivalence, encoded normative taxonomies, system auditability, recursive compliance engines, modular dispute filtering, and regulatory orchestration infrastructures that integrate religious legitimacy sources, regulators, and platforms under one governance machine without dissolving institutional autonomy (Muneeza 2020; Billah 2019). Without these governance connectors, Indonesia risks experiencing what this paper defines as normative usability failure, where a product is halal in juristic declaration, widely accepted in public legitimacy, yet remains governance-insufficient when implemented as a digital compliance instrument operating at platform speed.

This paradox becomes more acute when halal compliance is reinterpreted through a competitive market lens rather than doctrinal functionality alone. The daily operations of Indonesia's Islamic financial institutions show that the binding force of halal fatwa does not lie in statutory sanction but regulatory dependency, institutional delegation, and market trust engineering (Zulkifli 2012; Hosen 2004; Hooker 2008). Yet SMEs, digital lenders, Islamic crowdfunding platforms, consumer platforms screening halal products through machine learning, and ODR-guided family asset dispute cases reveal gaps in digital enforceability, a reform domain where Indonesia's doctrinal-centralization stack suffers acceleration constraints rather than legitimacy collapse (Billah 2019; Zulkarnain 2020).

This paper therefore argues that Indonesia's halal economy leadership must be redesigned from a normative authority holder into a normative usability pioneer. The future challenge is not to decentralize doctrinal authority, but to redesign its governance translatability so that legitimacy sources gain machine-readability, AI-verifiability, and blockchain auditability, enabling gates for halal compliance before or during product circulation, not simply after fatwa deliberative issuance cycles. This demands a conceptual shift: Indonesia must move from asking, "Is fatwa socially legitimate?" into "Can legitimacy be engineered into real-time compliance instruments that operate computationally, auditably, and in recursive governance cycles?"

Such governance reconstruction does not undermine classical fatwa authority but ensures its performativity, technical enforceability, and adaptive leadership in Muslim digital markets. By reconceptualizing fatwa not only as a legal opinion but as a legitimate metadata source capable of being encoded into governance schemas, Indonesia can evolve its halal governance model without dissolving religious institutional autonomy or judicial enforceability.

METHOD

This study applies a systematic library research approach, positioning academic literature as the primary data source to explain governance, compliance, and regulatory interoperability challenges in Indonesia's halal economy. Library research is methodologically appropriate because the problem under scrutiny is conceptual and structural, focusing on normative architecture, regulatory delegation, and technological translatability rather than empirical field measurement (Stapleton, Carter, and Bredahl 2020). The research adopts qualitative normative analysis, where texts are treated as analytical lenses for governance feasibility, legitimacy formation, and enforceability supply chains. The method relies on clustered keyword conceptual extraction, source triangulation, and theoretical linkage between Islamic legal policy and regulatory governance scholarship (Black 2011; Hosen 2007; Hooker 2008).

Data collection follows structured search and credibility mapping by prioritizing journal articles, books, regulatory documents, constitutional theory, and digital finance governance literature. The study incorporates conceptual clustering across key domains: fatwa institutionalization, delegated authority to sharia finance governance, halal regulatory migration into banking standards, regulatory paradoxes, and fintech-temporality gaps (Ascarya 2015; Hidayat 2016; Zulkifli 2012; Busyro 2017; Ichwan 2018). These sources are analyzed through governance lenses such as hybridity between religious legitimate gatekeeping and state regulatory authorization, temporal acceleration equivalence, and machine-readable compliance demands, frameworks widely discussed in modern regulatory theory but insufficiently operationalized in Indonesia's fatwa compliance logistics (Black, Baldwin, and Cave 2008; Muneeza 2020; Zulkarnain 2020).

The analysis process is conducted using bodynote synthesis, interpretative abstraction, and regulatory compatibility auditing, asking not only whether norms exist but whether their governance design is logically capable of operating at platform speed when encoded technically (Masud, Messick, and Powers 1996; Kamali 2003; Black 2008). This study evaluates normative interactions at three levels: legitimacy source, regulatory acknowledgment, and technological usability orchestration.

This methodological pathway enables the paper to construct a governance-oriented normative reconstruction framework, translating doctrinal legitimacy texts into adaptable governance instruments without replacing classical juristic authority, ensuring conceptual relevance for digital halal economy regulation workflows.

RESULT AND DISCUSSION

Market Ambition and the Expansion of Indonesia's Halal Economy Legal Framework

Indonesia's halal economy development agenda is among the most expansive in the Muslim world, strongly driven by national economic aspirations, demographic advantage, and political signaling of Sharia-based commercial legitimacy. Since 2018, Indonesia has framed halal governance not simply as doctrinal fulfillment but as part of state-led market competitiveness, spanning sectors such as Islamic banking, sukuk issuance, halal logistics, halal certification, Islamic insurance (takaful), Sharia-compliant capital markets, and digital financing platforms (Komite Nasional Ekonomi dan Keuangan Syariah 2018; Makki and Kimberly 2025). This ambition positions halal compliance as a strategic infrastructure for global trade influence rather than a purely juristic process. However, this expansion reveals structural fault lines when observed through regulatory governance literature, particularly regarding instrument readability, enforcement velocity, and digital auditability chains.

In regulatory theory, law becomes market-relevant when institutions can operationalize norms at the same tempo as the market cycle they aim to regulate (Black, Baldwin, and Cave 2008; Mashaw 2010). Indonesia's halal governance, despite its intense institutional centralization of epistemic authority, experiences friction due to differing institutional issuance speeds between juristic fatwa bodies and state regulatory endorsement cycles (Hosen 2007; Hooker 2008). These tensions emerge because the halal economy grows non-linearly, propelled by rapid market adoption, while institutional normative certification remains deliberatively linear, based on collective religious reasoning, long cycle discussion, and committee ratification. Consequently, product developers, especially in Islamic financial markets, treat legitimacy as a non-negotiable precursor but lack governance pipelines that transform legitimacy into instant regulatory usability post-issuance (Zulkifli 2012; Busyro 2017).

The ambition–legitimacy stack in Indonesia operates through institutional delegation without transforming fatwa outputs directly into codified statutes, resulting in regulatory dependency rather than positive law transformation (Hosen 2004; Ichwan 2018). This dependency succeeded historically when Islamic financial products moved at institutional cadence. However, as fintech civilization reshapes halal economic transactions into real-time machine-processed workflows, legitimacy issuance must operate as encoded compliance instrumentation, not just discursive juristic declaration (Billah 2019;

Muneeza 2020; Zulkarnain 2020). The governance gap does not indicate legitimacy erosion, but enforceability acceleration failure, a condition where norms produce approval, but governance fails to produce runtime deployability at platform temporality.

Digital halal finance introduces a legal environment where compliance requires real-time classification ontologies, automated risk filtering, data-driven contract auditing, and algorithmically validated Sharia screening infrastructures (Black 2008; Hirschl 2010; Buckley 2023). In Muslim digital finance markets, legitimacy certification often depends on two dimensions: (1) *source authority credibility*, and (2) *encoded governance ability readable by regulatory platforms or automated supervision engines* (Ullah, Harwood, and Jamali 2018; Muneeza 2020). In Indonesia, the first dimension is exceptionally strong. Institutions such as MUI and DSN-MUI produce central religious credibility that influences financial product orientation, judicial behavior, consumer acceptance, and regulatory acknowledgment (Hosen 2004; Hooker 2008). However, the second dimension, machine-readable governance encoding, remains weak. There is limited infrastructure that translates fatwa legitimacy into rule taxonomies that platforms can ingest at runtime, causing governance to lag behind market circulation and regulatory demand velocities.

A critical aspect of Indonesia's framework is its post-delegation legitimacy chain, where regulators reference fatwas for sharia finance governance but remain institutionally challenged in designing technical compliance classifications or execution monitoring systems for platform-speed economic products (Hidayat 2016; ISE Hidayat and Alamsyah 2019). Regulatory technology theory emphasizes automation, ex-ante risk screening, traceability, recursive compliance checks, and encoded contract supervision layers (Black 2011; Buckley 2023; Hirschl 2010). Halal economy governance in digital markets ideally requires standardized formats, adaptive issuance cycles, conditional binding modularity, and digitized enforceability resources that courts or regulators can audit, without requiring fatwas to function as coercive statutes (Zetzsche et al. 2017; Black 2011). Indonesia's system shows the opposite configuration: doctrinal centralization without accelerated digital enforceability, creating legitimacy without usability.

One dimension that strongly illustrates this tension is inheritance governance over family financial assets. Islamic inheritance jurisprudence provides precise distributive formulas (*fara'id*) that determine asset division, preventing disputes and ensuring doctrinal legitimacy of wealth redistribution (Masud et al. 1996; Kamali 2003; Billah 2019). Indonesia, through Pengadilan Agama, enforces inheritance decisions in binding legal judgments when disputes escalate. Yet, the circulation of assets, especially digital assets, tokenized wealth, and platform-managed family financing instruments, lacks ex-ante Sharia verification or asset audit interoperability pipelines that screen and certify assets recursively at platform speed (Zulkarnain 2020; Muneeza 2020). As the industry digitizes its halal economy workflows, asset governance operates faster than inheritance compliance certification, risking disputes not due to formulaic failure but temporal incompatibility.

Halal governance research underscores that digital ecosystem enforceability must include governance orchestration engines that bind institutions under a synchronized compliance instrument stack (Muneeza 2020; Billah 2019). Indonesia holds institutional authority but not digital orchestration mechanics. Halal law migration literature in banking contexts affirms that regulatory acknowledgment of fatwa authority has created normative centralization as an industrial necessity (Zulkifli 2012; Busyro 2017). Yet, technology legitimacy is not secured by acknowledgment alone but by verifiable governance mechanisms capable of being executed, validated, and audited in short recurring cycles, especially when platforms require instant compliance certification before product circulation.

Furthermore, Indonesia treats halal legitimacy as overwhelmingly *juristic-text dependent*, placing institutional centralization above encoded compliance classification, supervision modularity, enforcement acceleration parity, or regulatory audit interfaces that operate close to real market cycles (Horen 2007; Ichwan 2018; Hooker 2008). This makes Indonesia conceptually unique but technically under-engineered for digital enforceability. Regulatory governance literature frames this situation as legitimacy capture, not regulatory capture: the state successfully captures legitimacy references from fatwa institutions, while the governance architecture fails to operationalize those references into machine-readable, scalable compliance instruments.

This structural gap becomes more pressing when Indonesia competes within global halal market diffusion. While countries such as Dubai and Malaysia implement fintech sandboxes, smart contract audits, and RegTech supervision frameworks that orchestrate halal product compliance (Muneeza 2020; Billah 2019), Indonesia focuses policy convergence on doctrinal adoption, legal justification, and symbolic market signaling rather than computational enforceability stacks. Studies further show that this policy convergence often remains doctrinal, not governance-instrument oriented to enforce compliance technically in digital workflows (Busyro 2017; Hidayat 2016; Black 2011).

A systemic implication emerges: Indonesia has engineered halal legitimacy as a moral-legal gateway, but not as a digitally enforceable governance taxonomy capable of recursive verification and audit operations in real platform cycles. The problem is not the position of halal norms but the absence of instrument pipelines that accelerate usability without turning fatwa outputs into coercive statute layers. This underscores a broader theoretical conclusion: *Indonesia needs not only halal normative authority, but halal normative usability engineering to maintain leadership within a digital Muslim market diffusion environment.* Indonesia has established centralization, but not velocity equivalence; authority, but not encoded compliance engines; legitimacy, but not verification recursion; doctrinal output, but not auditable governance code inflows that manage product circulation at digital market cadence.

Thus, reforming halal governance for Islamic economic law in Indonesia must consider, at minimum, (1) semantic and computational taxonomy mapping, (2) machine-readable legal encoding benchmarks, (3) ex-ante asset screening pipelines, (4) modular enforceability integration layers, and (5) institutional audit orchestration engines that convert legitimacy into usability without replacing institutional autonomy or judicial binding authority. These critical lens dimensions remain core research domains in contemporary regulatory theory but represent structural absence in Indonesia's present halal economy governance infrastructure.

The Institutional Monopoly of Halal Legitimacy and Its Collision with Platform-Speed Markets

Indonesia's halal economy governance reveals a distinct institutional architecture where legitimacy authority is doctrinally centralized, while market operations, especially in the digital sector, progress at platform speed that far outpaces institutional issuance cycles. This study finds that the institutional monopoly of halal legitimacy, anchored in bodies such as MUI, BPJPH, and DSN-MUI, constructs a legal governance hierarchy in which product permissibility is validated upstream through clerical reasoning, policy delegation, and committee endorsement, before entering state regulatory channels. Although this model creates elite jurisprudential uniformity, it simultaneously risks systemic stagnation when faced with markets governed by algorithmic automation, instant contract execution, smart audit traceability, and machine-readable compliance screening (Hosen 2004; Hooker 2008; Busyro 2017).

The monopoly of halal legitimacy in Indonesia differs from regulatory monopolies in financial governance in non-religious jurisdictions. It is not a monopoly of coercive power, but a monopoly of epistemic permission-making, a governance privilege that historically ensured consistency in Sharia commercial product approval. Regulatory theorists describe such models as successful when norms evolve at the same temporal cadence as the markets they regulate, enabling enforceability to grow as fast as product diffusion cycles (Baldwin, Cave, and Lodge 2012; Black 2011). Indonesia's halal institutions possess legal influence, social legitimacy, and judicial dependency pipelines, but lack governance machinery that allows their normative outputs to be encoded instantly into enforceability stacks readable by platforms or regulatory technology systems.

This temporal mismatch becomes most visible in digital finance and platform-supplied halal products. In classical Islamic commercial governance, halal screening was bound by merchant trust, physical audit, bureaucratic reviews, and ex-ante institutional certification. Today, fintech ecosystems require a different legitimacy condition: normative authority must become instrument-readable at runtime, ingestible by software taxonomies, recursive compliance engines, automated halal condition rules, and tamper-proof platform audit layers (Zetzsche et al. 2017; Buckley 2023). The study finds that Indonesia continues to operate on the assumption that social-legal adoption suffices to produce halal governance, without engineering the regulatory technology and encoded contract taxonomy layers that enable enforceability replication within code-based ecosystems.

Central authority over halal legitimacy also creates product approval homogeneity but introduces a governance cliff when approval must become enforcement-instrumentation deployable across platforms, supply chains, e-commerce systems, and digital financing infrastructures. Indonesia's institutions delegate halal supervision responsibility to regulators for implementation, but the delegation layer is not interoperable in machine compliance. This makes the governance pipeline reactive, not preventive; discursive, not taxonomic; authoritative, not codified; and legally influential, but not digitally enforceable at platform cadence (Hidayat 2016; Muneeza 2020; Billah 2019).

Moreover, regulatory monopoly becomes productive only if paired with instrument acceleration ability that operationalizes rules into auditable, encoded compliance information chains (Black 2011; Zulkifli 2012). This study observes that Indonesia's halal institutions emphasize fatwa-based reasoning (*ijtihad jama'i*) and legal endorsement cycles but do not provide contract data-lifechain standards that could map halal conditions into code-enforced governance rules at runtime. Consequently, digital platforms must either build internal Sharia screening systems or adopt compliance heuristics that remain unverifiable ex-post by regulators until audit cycles occur, creating the paradox: halal legitimacy is centralized, but halal compliance instrumentation is decentralized.

This decentralization of enforcement, in contrast to centralization of legitimacy, risks governance inefficiencies that impact product innovation, regulatory reaction times, Sharia audit correctness, liability traceability, contract data integrity, and market competition legitimacy acceleration parity. Indonesia's halal governance pipeline becomes constrained by institutional rhythms rather than market rhythms.

The theoretical implication is fundamental: Indonesia experiences legitimacy centralization without enforceability centralization, producing doctrinal monopoly without digital enforceability mastery.

Further findings illustrate that halal legitimacy monopoly fails not due to epistemic contestation, doctrinal loss, or consumer rejection, but because platforms require instant encoded compliance deployment, not institutional recognition alone. Smart Halal governance literature describes ideal systems as combining authority and enforceability, not converting fatwas into coercive statutes but converting rulings into runtime-compliant governance instrumentation stacks (Muneeza 2020; Hosen 2004). Indonesia, despite having a strong legitimacy monopoly, lacks translation mechanisms enabling rulings to become taxonomically encoded into regulatory technology layers or digital market oversight frameworks.

This condition reveals another paradox: regulatory dependency is strong, courts, regulators, and industry often defer to halal institutions, but regulatory usability remains weak. Rather than enabling machine-readable halal governance instruments, Indonesia's institutions produce moral-legal approval gates that must be manually translated before becoming enforceable across platforms, delaying compliance-equivalence issuance cycles that markets require.

Thus, the critical issue is not "who owns halal legitimacy?" but "can halal legitimacy be transcribed into enforceability pipelines readable and audited recursively at platform speed?".

Unlike other regulatory monopolies which may stifle markets through coercive barriers, Indonesia's monopoly stifles markets through latency in instrumentation, rules that are authoritative but not readable by platforms, not auditable by blockchain, not classifiable by AI-run compliance engines, and not recursively enforceable by regulatory technologies. This undermines issuance velocity equivalence, forcing platforms to adopt internal or heuristic compliance models that are technically operational but legally unverifiable until later audit cycles occur.

Therefore, halal governance engineers emphasize that authority without encoded instrumentation produces doctrinal dependency but not doctrinal usability (Black 2011; Hirschl 2010; Buckley 2023). Indonesia has engineered its legitimacy hierarchy, but not its enforceability hierarchy; doctrinal monopoly, but not compliance monopoly; product permission gates, but not execution-scalable compliance inflows. The study concludes that Indonesia's halal legitimacy monopoly remains institutionally resilient but technologically fragile, especially when compared to countries implementing automated RegTech-halal audit supervision frameworks.

The broader conclusion is reinforced by regulatory governance theory: *Markets evolve non-linearly; institutions evolve linearly; code-based governance must evolve recursively.* Indonesia must engineer legitimacy usability, not merely safeguard legitimacy authority.

Regulatory–Technology Interoperability Gap: The Missing Middleware in Halal Financial Governance 9

This study identifies a core structural finding: Indonesia's halal economic governance lacks digital normative middleware that can channel doctrinal rulings into regulatory-technology execution layers at market runtime. The governance pipeline presently operates through a sequential process, fatwa issuance, regulatory acknowledgment, and eventual industrial implementation, yet it does not contain the machine-readable interoperability layer necessary to translate normative criteria into executable compliance instruments at digital market cadence (Black 2011; Zetzsche, Buckley, Arner, and Barberis 2017). In the fintech era, compliance is not only a legal attribute but also a computational attribute, requiring digital validation stacks that operate *pre-regulatory audit*, including smart supervision taxonomies, blockchain-certified claim traceability, and AI-screened legality condition parsing (Buckley, Arner, and Veidt 2023).

Unlike traditional Islamic commercial regulation where institutional legitimacy is sufficient for market uptake, platform markets demand translatability, not recognition alone. They require regulatory conditions be encoded into digital audit flows, instant supervisory connectors, recursively verifiable product approval taxonomies, and real-time automated dispute filtering engines (Baldwin, Cave, and Lodge 2012). This paper finds that Indonesia's institutional framework, while possessing upstream legitimacy deference, does not generate instrument-level digital enforceability, leaving market actors with a compliance autonomy gap that shifts responsibility back to private platforms, not regulators. This produces "centralization of permission, decentralization of execution", a normative bottleneck that delays product diffusion, audit parity, and platform-based halal supervision equivalence scalability (Muneeza 2020; Hidayat 2016).

Halal fatwas issued by DSN-MUI guide national sharia financial legitimacy and act as normative reference inputs for regulators, courts, and industry governance. However, the instrument-translation deficit becomes acute in digital financial product lifecycles. For example, Islamic courts have historically accepted fatwa dependency as a legitimate source of jurisprudential validation, yet dependency differs from technical usability when runtime governance is mediated not by courts but by automated platforms (Hosen 2004; Hooker 2008). This gap reveals the primary paradox examined by this paper: halal legitimacy originates doctrinally but must operate instrumentally in code-based regulatory ecosystems to avoid governance latency that undermines market competitiveness, especially against jurisdictions implementing digital certification stacks as regulatory alignment anchors for halal financial services (Billah 2019; Zulkifli 2020).

Regulatory governance scholars articulate that effective modern regulation operates through orchestration rather than direct coercion, utilizing delegative governance design, hybrid institutional authority, technical enforceability logic, and platform-speed supervision filtering equivalence (Mashaw 2010; Black 2008). Indonesia employs delegation of legitimacy, regulators defer to MUI and DSN-MUI for normative gates and religious product legitimacy mappings, yet delegation is not encoded into governance automation stacks, resulting in unenforceable compliance criteria until manually interpreted by industry. The absence of regulatory adapters causes sharia compliance to operate like doctrinal accreditation: socially accepted, legally deferred, but not digitally auditable or recursively governance-enforceable at runtime, especially when financial contracts, user claims, and halal conditions become ex-ante validated by algorithms rather than clerical gatekeeping bodies (Ascarya 2015; Stapleton, Carter, and Bredahl 2020).

This study's literature synthesis shows that a fatwa is law in legitimacy but not yet law in execution without encoded enforceability instrumentation pipelines. Indonesia's halal financial legitimacy presently exists at the textual level, but RegTech interconnectivity requires taxonomy-level certificate standardization, instantly auditable condition claims, end-to-end platform enforceability flows, and AI-certifier legal benchmarking reliability mapping (Arner, Barberis, and Buckley 2020; Buckley 2023). Without these digital adaptors, Indonesia's halal financial governance is caught in normative latency: fatwas determine permissibility but not enforceability speed; institutions grant legitimacy but not digital auditability; regulators depend on fatwa doctrine but not on its machine deployability; courts defer to halal legitimacy but platform runtime governance is not court-mediated.

This gap exposes a governance reality: markets evolve exponentially, fatwas evolve deliberatively, and enforceability is expected to evolve recursively via code-automated supervision stacks. Regulatory systems in open digital finance markets typically utilize a middleware layer that synchronizes legitimacy into enforceability before market execution, Indonesia lacks this stack layer, not the legitimacy source. The system holds authority without connectivity, norms without translatability, dependency without usability, and delegation without automation legality connectors that ensure halal financial products remain recursively verifiable and blockchain-auditable at platform speed (Zetzsche et al. 2017; Buckley, Arner, and Veidt 2023).

Three implications emerge. First, regulatory acknowledgment without regulatory instrumentation weakens platform runtime oversight because markets cannot interact with institutional norms digitally (Black 2011). Second, fatwas without encoded compliance taxonomies reduce enforceability equivalence against jurisdictions where certification becomes part of regulatory audit trails before execution (Muneeza 2020; Billah 2019). Third, courts may historically uphold fatwa dependency, yet platform runtime governance is not court-mediated, creating a new layer of sharia product liability ambiguity because enforceability must occur before judicial dispute filtering can even take place (Hosen 2004; Hooker 2008).

Consequently, this paper confirms that Indonesia requires digital normative adapters rather than statutory conversion of fatwas into binding acts. What is missing is not legitimacy, but middleware that makes legitimacy usable as enforceability filters at digital platform cadence. The most competitive jurisdictions do not erase religious authority, they enact its translatability through encoded standard taxonomies, smart claim verification stacks, blockchain audit layers, and recursive platform dispute modularity filters that enable compliance to operate before regulatory audit cycles begin, not after them.

The study thus conceptually asserts: halal legitimacy without digital enforceability stacks creates authority friction when markets operate through algorithms, not institutions. Legal reform must therefore prioritize normative usability-equivalence issuance velocity, middleware deployment stacks, and technology-enabled enforceability pipes, ensuring Indonesia's doctrinal dominance does not mutate into digital compliance latency.

CONCLUSION

This article concludes that Indonesia's halal economy governance presents a distinctive institutional architecture where doctrinal centralization through DSN-MUI and MUI fatwas serves as the primary legitimacy gateway, shaping the normative foundation for sharia-based financial products before state regulatory attachment. This model has historically demonstrated success in banking and Islamic financial sectors where regulatory cycles run deliberatively and industry adoption occurs through institutional acknowledgment. However, the study further confirms that the critical vulnerability in the current governance design is not the theological authority of fatwas, but their technical translatability gap within digital market ecosystems (Black 2008; Billah 2019).

The research demonstrates that while Indonesia holds strong fatwa centralization power and regulatory dependency, it simultaneously suffers from a Regulatory-Technology Interoperability Gap, the absence of digital middleware that can encode halal rulings into platform-executable compliance stacks at fintech speed. In contemporary digital finance markets, legitimacy must move beyond recognition into interoperability, auditability, and recursive enforceability through regulatory technology connectors that operate in real time (Zetzsche, Buckley, Arner, and Barberis 2017; Buckley, Arner, and Veidt 2023).

This paper conceptually asserts: Fatwa is law in legitimacy, governance is law in enforceability, and the future synchronization of both lies in digital normative engineering rather than statutory coercive hard-binding (Black 2011; Mashaw 2010). Therefore, Islamic economic law reform must prioritize normative usability equivalence, converting doctrinal authority into machine-readable halal compliance taxonomies, blockchain-auditable certification trails, AI-verifiable sharia conditions, and platform-orchestrated supervision engines that operate as upstream digital filters before regulatory audit cycles begin, rather than after (Muneeza 2020; Stapleton, Carter, and Bredahl 2020).

Finally, Indonesia must reconstruct its halal ambition through a new governance benchmark: centralized in doctrine, orchestrated in governance, auditable in technology, adaptive in regulatory design, and executable at market runtime. Without abandoning classical epistemic authority, Indonesia should shift toward governance-oriented normative infrastructure, ensuring that current normative dependency evolves into normative usability, preserving Indonesia's leadership not just in halal permission authority, but in halal compliance execution capability within digital market environments.

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