



Indonesia's halal industry: Opportunities, challenges, and strategic directions

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Abstract

Purpose – This study aims to provide a comprehensive analysis of the opportunities, challenges, and strategic frameworks for developing Indonesia's halal industry. It aims to identify the key drivers of growth while simultaneously addressing the fundamental obstacles that hinder its potential.

Methodology – This research employs a descriptive-analytical qualitative approach, utilizing a literature review and content analysis of secondary data. The sources included academic articles, official reports, and policy documents. The data were analyzed to synthesize key themes and formulate a cohesive strategic framework for stakeholders.

Findings – The findings reveal that Indonesia's halal industry possesses significant opportunities, driven by its vast Muslim population, strong government support, and strategic geographical location. However, it faces major challenges, including fragmented inter-agency coordination, a complex halal certification process for MSMEs, and a lack of qualified human resources to implement the program.

Implications – This study offers a practical, integrated strategic model that provides clear policy recommendations for the government and actionable guidance for businesses. The findings are expected to contribute to the academic discourse on the Islamic economy and provide a roadmap for accelerating the growth of Indonesia's halal industry, positioning the country as a key global player.

Originality – This paper provides a holistic and integrated analysis that bridges the gap in the existing literature by systematically connecting the interplay between regulatory, supply chain, and human resource challenges. It proposes a unique and comprehensive strategic model that offers practical and prescriptive solutions for all stakeholders.

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Introduction

The global halal industry has evolved beyond the traditional confines of food and beverages, expanding into cosmetics, pharmaceuticals, fashion, tourism, and Islamic finance, reflecting its dynamic and multifaceted nature (Laluddin et al., 2019; Punit, 2024). Recent reports by the Organization of Islamic Cooperation (OIC) and the State of the Global Islamic Economy highlight a rapid annual growth trajectory, indicating that the global halal economy will continue to reach trillions of dollars, fueled by increasing consumer awareness of halal lifestyle practices and an expanding global Muslim population (Muhammad et al., 2025). This development not only

underscores the relevance of the halal market to Muslims but also reveals its universal appeal, as non-Muslim countries increasingly participate in the halal value chain to leverage emerging economic opportunities (Ahmad et al., 2024; Shaarani et al., 2024). Consequently, the halal industry has transformed into a strategic sector of global significance, necessitating comprehensive studies to assess its current and future potential.

The growing prominence of halal standards has positioned them as symbols of quality, cleanliness, and ethical production, establishing trust and credibility in the international market (Muhammad et al., 2025). Technological innovations, particularly blockchain and digitalization, have been integrated to enhance supply chain traceability, enabling transparent verification of upstream and downstream processes (Harsanto et al., 2024; Purusottama et al., 2023; Sunmola et al., 2025). Additionally, the halal tourism segment demonstrates significant potential, driven by Muslim travelers seeking destinations equipped with facilities aligned with Islamic principles (Alam et al., 2024; Hariani & Mohd, 2024). Despite these opportunities, challenges persist, including global standardization gaps, fragmented supply chains, and regulatory inconsistencies. Addressing these challenges through collaborative efforts is essential for sustainable growth and positioning the halal industry as a robust, globally competitive sector (Ellahi et al., 2025; Ghali & Chia-Hua, 2025; Syakirunn'am et al., 2025).

Indonesia, the country with the world's largest Muslim population exceeding 230 million, occupies a strategically significant position in the global halal ecosystem, offering both an extensive domestic market and potential as an international halal hub (Danarta et al., 2024; Vanany et al., 2020). Domestic demand, particularly among Muslim millennials, is driving the increased consumption of halal products, presenting opportunities for both local businesses and MSMEs (Arifin et al., 2023; Hanifasari et al., 2024). However, despite these advantages, Indonesia's competitiveness in the international halal market remains underdeveloped because of challenges such as fragmented market structures and inconsistent quality standards (Abimanyu et al., 2024). This underscores the need for focused research to optimize domestic capabilities to transform Indonesia into a leading producer, consumer, and exporter in the halal sector.

Government initiatives have been pivotal in shaping Indonesia's halal industry, particularly through accelerating halal certification processes and creating supportive regulatory frameworks (Zulfa et al., 2023). Public awareness campaigns and incentives have encouraged businesses, especially MSMEs, to engage in halal production and compliance (Hendijani & Sanny, 2021; Muhammad et al., 2025). However, systemic barriers, such as limited understanding of halal certification procedures and complex supply chain logistics, impede broader adoption (Ardiantono et al., 2024). Addressing these constraints requires integrated strategies that combine regulatory support, technological adoption, and education to enhance capacity, ensuring that the Indonesian halal industry capitalizes on its demographic and economic advantages over its competitors (Wahab & Mahdiya, 2026).

The development of Indonesia's halal industry contributes directly to national economic stability by generating employment, enhancing competitiveness, and increasing GDP contributions (Sutan et al., 2022). An integrated halal value chain from raw materials to final products ensures higher product quality, safety, and sustainability while fostering cross-sector collaboration (Hasibuan & Lubis, 2024). MSMEs, which form the backbone of the Indonesian economy, play a crucial role in this supply chain. Policy interventions promoting halal certification adoption among MSMEs can facilitate domestic and international market expansion, thereby strengthening Indonesia's economic resilience and global market positioning (Cordova et al., 2025; Pratikto et al., 2023).

The halal industry also underpins the growth of halal tourism, a rapidly expanding market segment with significant revenue potential (Wahyudin et al. 2022; Yuliani et al. 2023). Indonesia can attract Muslim tourists by providing Islamic-friendly infrastructure, including halal hotels, cuisine, and culturally sensitive services (Joeliaty et al., 2020; Sakinah & Dewi, 2025). Such initiatives enhance Indonesia's reputation as a safe and appealing destination for Muslim travelers, simultaneously stimulating economic activity in hospitality, retail, and local communities. The strategic development of halal tourism reflects a dual objective: fostering economic growth and promoting Indonesia's soft power within the global Muslim community (Martaleni et al., 2025).

Despite its potential, the Indonesian halal industry faces critical challenges, including inefficient regulatory implementation, high certification costs and fragmented supply chains (Ardiantono et al., 2024; Muhammad et al., 2025; Pratikto et al., 2023). The lack of standardized procedures and integrated traceability systems compromises product integrity and market confidence (Hidayah et al., 2024; Nugroho et al., 2024). Additionally, low halal literacy among business actors and consumers generates misconceptions, impeding active participation and slowing industry growth (Hennida et al., 2024; Wahyudin et al., 2022). Addressing these obstacles requires comprehensive strategies encompassing policy reform, technological innovation, and educational initiatives to ensure sectoral development and global competitiveness.

Given the outlined opportunities and barriers, this study aims to provide an in-depth analysis of the Indonesian halal industry, identifying strategic areas to enhance growth and overcome operational and regulatory challenges (Danarta et al., 2024; Fathonih et al., 2019). By examining the interplay between demographic potential, government policies, and supply chain dynamics, this study seeks to offer actionable recommendations for optimizing digital ecosystems, enhancing certification literacy, and fostering stakeholder engagement (Cordova et al., 2025; Hendrik et al., 2024). Ultimately, this study contributes to establishing Indonesia as a leading player in the global halal economy, supporting sustainable economic development, and reinforcing its position as a key hub in international halal trade.

Although the existing literature has extensively discussed the growth of the global halal industry and its challenges, most research tends to focus on isolated aspects. For instance, there are in-depth studies on halal certification barriers for MSMEs (Muhammad et al., 2025; Pratikto et al., 2023) and product traceability issues with blockchain technology (Harsanto et al., 2024; Sunmola et al., 2025). However, a gap remains in the literature that holistically integrates all these elements into one comprehensive analytical framework. Existing research has not systematically explored how regulatory challenges, market fragmentation, and literacy gaps collectively influence the halal industry's overall potential in Indonesia. While several studies have addressed specific barriers, such as halal supply chain inefficiencies (Aam et al., 2023; Ardiantono et al., 2024; Harsanto et al., 2024) and certification challenges for micro and small enterprises (Muhammad et al., 2025; Pratikto et al., 2023), there is limited synthesis connecting these factors holistically. Systematic literature reviews in related contexts highlight that fragmented market structures, inconsistent regulatory enforcement, and knowledge gaps among consumers and producers significantly constrain the industry's growth (Alam et al., 2024; Battour et al., 2024; Hidayah et al., 2024). Moreover, bibliometric analyses suggest that integrating these factors through a coordinated policy and knowledge framework could substantially enhance the halal sector's competitiveness and sustainability (Aam et al., 2023; Harsanto et al., 2024). Therefore, understanding the interplay among regulatory, market, and literacy dimensions remains critical for realizing the potential of Indonesia's halal industry.

This research aims to fill this gap by analyzing opportunities and challenges across various sectors, from food and beverages to halal tourism (Hariani & Mohd, 2024; Sakinah & Dewi, 2025), and by formulating integrated and implementable strategies. The current literature has not explicitly offered a strategic roadmap to serve as a practical guide for stakeholders. The main contribution of this research is to present a solid and integrated strategic model based on an empirical analysis of various aspects of the problem. Thus, this study will not only enrich the body of scientific knowledge but also provide practical and prescriptive solutions to help Indonesia optimize its role as a major player in the global Halal economy.

This study is expected to make significant contributions, both theoretically and practically, to the development of the halal industry in Indonesia. Theoretically, this study enriches the existing literature by presenting a holistic framework that integrates various factors influencing halal industry growth, including regulation, supply chain, and consumer awareness. By analyzing the interconnections between these factors, this study provides a deeper understanding of the complex dynamics of the halal industry, going beyond studies that focus on only one aspect (Ardiantono et al., 2024; Muhammad et al., 2025). The model proposed in this study can be used as a foundation for further research and theory development in the field of Islamic economics. From a practical

perspective, this study's contribution is highly relevant and can be implemented immediately by stakeholders. The research findings will formulate clear and detailed policy recommendations for the government to simplify the halal certification process and optimize regulation implementation (Zulfa et al., 2023). Additionally, this study provides a strategic roadmap for MSME actors to enhance their competitiveness in domestic and global halal markets, including guidance on adopting digital technology for supply chain efficiency (Cordova et al., 2025; Harsanto et al., 2024). Thus, this research is not only academic but also serves as a practical tool for fostering inclusive and sustainable economic growth in Indonesia.

Literature Review

The concept of the halal industry

The halal industry represents an integrated economic ecosystem, encompassing not only the food and beverage sector but also other sectors aligned with Sharia principles, such as fashion, tourism, and finance (Ahmad et al., 2024; Laluddin et al., 2019). Theoretically, this aligns with the resource-based view (RBV) and stakeholder theory, which emphasize leveraging unique resources and meeting the expectations of key stakeholders to create competitive advantage (Abimanyu et al., 2024; Ardiantono et al., 2024). In the food sector, halal practices extend beyond avoiding prohibited ingredients, emphasizing ethical and hygienic management of the entire production process from farm to table (Vanany et al., 2020). Halal tourism ensures Muslim-friendly facilities and services that respect religious and cultural practices (Alam et al., 2024; Danarta et al., 2024). Islamic finance offers Sharia-compliant investment and funding mechanisms that avoid interest, speculation, and uncertainty (Fathonih et al., 2019). By integrating these sectors under a shared ethical and religious framework, the halal industry exemplifies a holistic application of the RBV and stakeholder theory, supporting the research objective of understanding the drivers of consumer trust and business competitiveness within the halal ecosystem (Muhammad et al., 2025). This theoretical grounding also underpins the hypothesis that ethical and Sharia-compliant practices positively influence consumer demand and market growth in the halal industry.

Beyond compliance, the halal concept embodies a holistic *thayyiban* approach that ensures products and services are beneficial, safe, and healthy (Aam et al., 2023). The halal supply chain demonstrates this principle, requiring traceability, integrity, and adherence to quality standards at every stage, from raw materials to distribution (Ellahi et al., 2025; Ghali & Chia-Hua, 2025; Sunmola et al., 2025). This framework supports the application of institutional theory, which posits that businesses conform to regulatory, normative, and cultural pressures to gain legitimacy and stakeholder acceptance (Nugroho et al., 2024; Pratikto et al., 2023). The adoption of halal certification and digital technologies within supply chains strengthens consumer trust and drives demand for verified products, which aligns with the research objective of exploring the determinants of market acceptance and operational efficiency in the halal sector (Hanifasari et al., 2024; Martaleni et al., 2025). As the global Muslim population grows, these theoretical lenses collectively justify the hypotheses that (1) Sharia-compliant practices enhance consumer confidence and (2) effective halal supply chain management fosters innovation and economic growth across multiple sectors, reflecting a synergistic integration of ethical, religious, and quality considerations in the halal industry.

Opportunities in the halal industry

The global and domestic halal industry presents considerable opportunities, underpinned by both demographic and behavioral factors. Globally, the sector has expanded rapidly due to the rising Muslim population and increasing awareness of halal products and services (Hafiz, 2020). Theoretical frameworks, such as the Resource-Based View (RBV), justify focusing on unique capabilities like halal certification and integrated supply chains as sources of competitive advantage (Aam et al., 2023; Ghali & Chia-Hua, 2025). In Indonesia, as the country with the largest Muslim population, market potential is substantial, strengthened by governmental support for halal ecosystem development, including certification processes and sharia tourism promotion (Danarta et al., 2024; Muhammad et al., 2025; Pratikto et al., 2023). Consumer behavior, particularly among

younger Muslims, indicates preference for products that comply with sharia principles (Arifin et al., 2023). The integration of halal supply chains ensures product authenticity and credibility, enhancing market competitiveness (Ghali & Chia-Hua, 2025; Harsanto et al., 2024). This alignment with RBV theory supports the research objective of evaluating strategic frameworks to optimize Indonesia's halal industry performance and competitiveness.

Technological adoption is pivotal in addressing challenges and creating new market opportunities in the Halal industry. Innovation diffusion theories support the role of emerging technologies, such as blockchain and AI, in improving transparency and traceability in halal supply chains, enhancing consumer trust and operational efficiency (Hoang & Nguyen, 2025; Purusottama et al., 2023; Sunmola et al., 2025). Digitalization and e-commerce platforms facilitate MSMEs in reaching global audiences, overcoming geographical constraints (Cordova et al., 2025), while in halal tourism, digital tools provide information on halal-compliant services and destinations (Hendrik et al., 2024; Immas et al., 2025). Ensuring integrity in meat supply chains through technology adoption is critical for maintaining product legitimacy (Ellahi et al., 2025; Nugroho et al., 2024). This technological integration aligns with the research hypothesis that digital and technological strategies significantly enhance operational performance, consumer trust, and market expansion in the halal sector, thereby reinforcing Indonesia's strategic position as a global halal hub and fulfilling the study's objective of proposing an integrated, technology-enabled strategic framework.

Challenges in the halal industry

Despite its significant potential, Indonesia's halal industry faces a complex array of internal challenges that can hinder its growth. A core issue is the fragmentation and lack of integration in regulations and standardization, which often vary across certification bodies and international borders (Aam et al., 2023; Laluddin et al., 2019). This regulatory inconsistency can create confusion for producers and consumers, reducing trust and competitiveness on a global scale. Additionally, Micro, Small, and Medium Enterprises (MSMEs) face barriers related to cost, bureaucratic procedures, and insufficient understanding of halal certification processes (Ardiantono et al., 2024; Muhammad et al., 2025). Public awareness of the holistic halal concept remains limited, often restricted to food and beverages while overlooking sectors such as tourism, cosmetics, and finance (Vanany et al., 2020; Wahyudin et al., 2022). Furthermore, inadequate infrastructure, including insufficient Islamic financing and underdeveloped digital and physical facilities, constrains the growth of the halal ecosystem (Fathonih et al., 2019; Hasibuan & Lubis, 2024; Sunmola et al., 2025). The application of the resource-based view (RBV) and institutional theory aligns with these observations, emphasizing that the strategic allocation of resources and regulatory alignment can enhance competitiveness and sustain halal industry growth by addressing both tangible and intangible capabilities.

Externally, Indonesia's halal industry must contend with growing international competition, particularly from countries that have established themselves as global halal hubs. Malaysia exemplifies successful branding and ecosystem development through proactive regulation and strong government support, especially in halal tourism (Ahmad et al., 2024; Alam et al., 2024; Johan & Rahman, 2025). Meanwhile, non-Muslim countries such as South Korea are entering the halal market, demonstrating that competition extends beyond Muslim-majority countries (Hoang & Nguyen, 2025; Khawaja Muhammad et al., 2019; Widyantoro et al., 2019). The resource-based view (RBV) and strategic choice theory suggest that Indonesia must leverage its unique resources and capabilities, including its large Muslim population, cultural heritage, and evolving halal knowledge base, to differentiate itself on the international stage. By integrating innovation, digitalization, and strategic policy coordination, Indonesia can overcome both internal inefficiencies and external pressures, enhancing its position in the global halal market and achieving a sustainable competitive advantage (Ellahi et al., 2025; Ghali & Chia-Hua, 2025; Purusottama et al., 2023).

Research Methods

This study adopts a qualitative, descriptive-analytical approach, in line with the methods commonly used in similar studies that explore complex issues such as the halal industry (Hafiz, 2020; Laluddin

et al., 2019). This approach was chosen for its ability to provide an in-depth understanding of complex contexts, dynamics, and phenomena, consistent with the research objectives. The data source for this study consists of secondary data, including scholarly literature, institutional reports, statistical data, and policy documents. The selection process followed systematic criteria to ensure relevance and quality: only peer-reviewed journal articles, government and industry reports, and publications directly related to the Indonesian halal industry were included. A total of 85 documents published between 2019 and 2025 were analyzed to capture recent trends and insights. The selection emphasized studies addressing halal supply chain management, certification processes, consumer behavior, and tourism (Aam et al., 2023; Alam et al., 2024; Ardiantono et al., 2024; Battour et al., 2024; Harsanto et al., 2024). Data extraction focused on identifying regulatory challenges, market fragmentation, literacy gaps, and strategic solutions. This approach allowed for a comprehensive synthesis of the current state of knowledge, highlighting gaps and opportunities for the development of Indonesia's halal industry.

This choice is reinforced by the fact that many similar studies rely on extensive document analyses and literature reviews to build a theoretical framework (Alam et al., 2024; Battour et al., 2024). The primary data collection process was carried out through a literature study and document analysis, which are fundamental techniques for secondary data-based qualitative research. The collected data were then analyzed using content analysis techniques to identify key themes, such as digitalization, certification, and the role of MSMEs that emerge in the literature. Furthermore, data synthesis will be performed by combining and interpreting the findings from various sources to build a cohesive and comprehensive argument. The objective of this analysis is to formulate structured strategic recommendations for stakeholders in Indonesia's halal industry.

Results and Discussion

Analysis of opportunities for the halal industry in Indonesia

Indonesia's demographic advantage represents the most immediate and critical opportunity for developing its halal industry. With the world's largest Muslim population, particularly dominated by Gen Z and Muslim millennials, there is substantial domestic demand for halal products across the food, cosmetics, pharmaceuticals, and tourism sectors (Arifin et al., 2023; Widyanto & Imaduen Aesa, 2022). This opportunity is urgent because domestic consumption forms the foundation of a sustainable halal economy and serves as a testing ground for product innovation. The awareness and positive attitudes of younger consumers encourage MSMEs to adapt and innovate their offerings, effectively bridging domestic preferences with global halal standards. However, the effectiveness of this demographic advantage is closely tied to government support and regulatory certainty, which can either reinforce or constrain market potential. Hence, leveraging this demographic must be coordinated with strategic policies to maximize the translation of consumer demand into scalable business growth (Fathonih et al. 2019). The interaction between demographic potential and supportive policies accelerates the development of a Sharia-based business ecosystem.

Structured support from the Indonesian government acts as a reinforcing mechanism for other opportunities in the halal sector. Through the Halal Product Assurance Law (UU JPH) No. 33 of 2014, along with MSME-focused initiatives, the government ensures regulatory certainty and practical facilitation for halal certification (Muhammad et al., 2025; Pratikto et al., 2023; Zulfa et al., 2023). This regulatory framework strengthens domestic trust in halal products and enables MSMEs to compete internationally. Moreover, initiatives such as halal hubs and promotional infrastructure amplify the demographic advantage by efficiently connecting producers and consumers (Shaarani et al., 2024). Halal tourism policies further illustrate this synergistic effect, as they leverage Indonesia's cultural and natural assets to attract Muslim tourists while embedding Islamic values in the tourism sector (Danarta et al., 2024; Hartarto & Azizurrohman, 2022). Thus, the government's strategic role interacts with both market and geographical opportunities, reinforcing domestic consumption, enhancing global competitiveness, and simultaneously addressing supply chain challenges.

Indonesia's strategic geographic location offers complementary opportunities that strengthen both domestic and international halal markets. Situated along key international trade routes and neighboring major Muslim countries in Southeast Asia, Indonesia is uniquely positioned to serve as a halal trade hub connecting Asia, the Middle East and Europe (Abimanyu et al., 2024; Widyantoro et al., 2019). This strategic position magnifies the value of domestic demand and government facilitation by creating export opportunities and encouraging regional trade cooperation in ASEAN. The interaction of geographic advantage with demographic and regulatory factors creates a mutually reinforcing system: strong domestic demand validates export readiness, while government policies ensure the reliability of halal certification for trade. Furthermore, efficient logistics and halal trade corridors can transform the tourism and product sectors into integrated economic engines, highlighting the synergistic potential across the supply chain (Aam et al., 2023; Hariani & Mohd, 2024). Thus, geographic positioning is not only an opportunity in itself but also a catalyst that amplifies other strategic advantages of the region.

Technological advancements and digitalization provide a transformative opportunity that interacts with and enhances all other identified strengths of the industry. The adoption of blockchain, artificial intelligence, and digital traceability systems increases transparency, strengthens consumer trust, and simplifies certification for MSMEs (Harsanto et al., 2024; Hidayah et al., 2024; Purusottama et al., 2023). Digital platforms facilitate halal tourism promotion, operational efficiency, and broader market access, enabling MSMEs to effectively leverage demographic demand and government initiatives (Cordova et al., 2025; Immas et al., 2025). Moreover, technology mitigates logistical and certification constraints, reinforcing Indonesia's geographic and regulatory advantages by ensuring reliable supply chains and credible international trade (Ellahi et al., 2025; Sunmola et al., 2025). In combination, these technological tools do not operate in isolation but amplify the effects of demographic, regulatory, and geographic opportunities, creating a holistic ecosystem for the sustainable growth of the halal economy. Prioritizing technological adoption is therefore crucial, as it ensures that other opportunities are fully realized and mutually strengthened, driving Indonesia toward a competitive halal industry.

Analysis of challenges in the halal industry in Indonesia

Despite the numerous opportunities within Indonesia's halal industry, the coordination among key institutions emerges as the most critical challenge affecting overall industry efficiency. The ecosystem involves the Halal Product Assurance Agency (Badan Penyelenggara Jaminan Produk Halal, BPJPH), Halal Inspection Agencies (Lembaga Pemeriksa Halal, LPH), the Indonesian Ulama Council (Majelis Ulama Indonesia, MUI), and various government ministries, yet gaps in harmonization create procedural complexity and bureaucratic delays, particularly for MSMEs (Muhammad et al., 2025; Zulfa et al., 2023). Analytically, this challenge is not isolated; poor inter-institutional coordination exacerbates other problems such as certification complexity and supply chain inefficiencies. MSMEs face redundant documentation requirements, unclear procedural guidance, and overlapping regulatory mandates, which collectively increase operational costs and reduce competitiveness in domestic and global markets. From a strategic perspective, an integrated governance framework with streamlined communication channels is essential to mitigate legal and operational uncertainties. In addition, fostering cross-institution collaboration can reduce bottlenecks in certification, enhance policy clarity, and indirectly address resource constraints and market access limitations. This indicates that addressing coordination deficiencies may have a multiplicative effect in resolving other systemic challenges within the halal ecosystem.

Another pressing challenge is the complexity and cost intensity of the halal certification process, which particularly hinders MSME participation (Ardiantono et al., 2024; Pratikto et al., 2023). While government efforts to simplify procedures exist, implementation gaps persist due to insufficient awareness and technical knowledge among business actors. When combined with limited financial and human resources, the certification process becomes a strategic bottleneck that directly affects market expansion and consumer trust. Notably, the certification challenge is intertwined with institutional coordination; inefficient inter-agency communication prolongs processing time, leading to increased MSME opportunity costs (Muhammad et al., 2025).

Furthermore, the lack of incentives and supportive policies disproportionately affects smaller enterprises, reinforcing market inequity. Addressing this challenge requires not only procedural simplification but also targeted assistance programs, such as training, financial subsidies, and digital tools that can mitigate resource constraints. Strategically, prioritizing MSME-friendly certification mechanisms could accelerate industry formalization, enhance product legitimacy, and strengthen Indonesia's competitive position in both domestic and ASEAN halal markets (Abimanyu et al. 2024).

Human resources constraints represent a third, highly interconnected challenge that compounds both coordination and certification difficulties. There is a persistent shortage of qualified halal auditors, supply chain managers familiar with sharia principles, and practitioners adept at regulatory compliance (Joeliaty et al., 2020; Junaidi et al., 2019). This competency gap directly undermines operational efficiency and can compromise product integrity. Importantly, it also slows MSME adoption of halal standards, as enterprises lack access to qualified advisors and technical expertise. Although higher education programs in sharia economy are expanding, curriculum misalignment with industry needs limits the readiness of graduates to meet practical demands. When considered alongside certification complexity, the shortage of skilled personnel intensifies barriers for small businesses, creating a feedback loop where limited HR capacity perpetuates low compliance and delayed market access. Therefore, investments in professional development, vocational training, and industry-academia collaborations are critical. Prioritizing HR development not only addresses operational inefficiencies but also strengthens regulatory compliance, supply chain integrity, and the broader credibility of Indonesia's halal industry (Hanifasari et al., 2024; Hidayah et al., 2024).

Finally, consumer perception and supply chain integrity are challenges that threaten the sustainability and market trust of the industry. Misunderstandings about halal concepts, particularly in the tourism and food sectors, reduce the effectiveness of marketing and policy initiatives (Hennida et al., 2024; Wahyudin et al., 2022). Simultaneously, ensuring end-to-end traceability is difficult because of cross-contamination risks, counterfeiting, and limited adoption of advanced technologies such as blockchain and AI-enabled monitoring systems (Ellahi et al., 2025; Sunmola et al., 2025). These issues are interconnected with prior challenges: institutional coordination and HR competency directly influence the enforcement of supply chain standards, while certification complexity affects the degree to which products are officially verified. Consequently, consumer distrust emerges from systemic weaknesses rather than isolated incidents. Addressing these intertwined challenges requires integrated strategies that combine educational campaigns, technological adoption, and robust regulatory oversight. In particular, promoting digital tools for traceability and enhancing public awareness can simultaneously reinforce consumer confidence, improve market transparency, and elevate Indonesia's position in the global halal economy (Aam et al., 2023; Ghali & Chia-Hua, 2025).

Formulating a strategy for the halal industry in Indonesia

Based on the identified opportunities and challenges, a robust regulatory strategy is crucial for driving Indonesia's halal industry forward. Harmonization and simplification of policies should be prioritized, with the establishment of a central coordinating authority empowered to align the roles of the BPJPH, MUI, LPH, and related ministries (Muhammad et al., 2025; Zulfa et al., 2023). This integrated approach aims to create a transparent and efficient bureaucracy, reducing the administrative burden on businesses, particularly MSMEs that face capital and capacity limitations (Pratikto et al., 2023). Halal certification procedures must be digitized through a centralized platform, enabling online applications, monitoring, and certificate issuance. Financial incentives, such as fee subsidies for MSMEs, could further stimulate compliance while enhancing market participation (Cordova et al., 2025). Conceptually, this strategy interrelates regulatory reform, financial support, and digital solutions to improve legal certainty, business facilitation, and halal ecosystem integrity. By strengthening the institutional foundation, Indonesia can ensure that halal certification is accessible, reliable, and globally recognized, which is critical for sustaining a competitive advantage in the international halal market (Abimanyu et al., 2024; Muhammad et al., 2025).

Targeted marketing strategies are necessary to exploit opportunities in the rapidly growing young Muslim consumer segment (Arifin et al., 2023; Widyanto & Imaduena Aesa, 2022). Marketing campaigns must go beyond religious compliance and integrate contemporary lifestyle values, including ethics, sustainability, and health-conscious choices (Alam et al., 2024; Battour et al., 2024). Digital platforms such as Instagram, TikTok, and YouTube provide effective channels for engaging consumers through interactive and informative content and leveraging credible Muslim influencers to enhance reach and trust (Hanifasari et al., 2024). In parallel, consumer education about halal certification is essential to highlight both the religious and quality assurance aspects. Tourism promotion must emphasize unique halal-friendly destinations that offer authentic spiritual experiences without compromising the local culture, complemented by services such as halal restaurants and prayer facilities (Danarta et al., 2024; Martaleni et al., 2025). Conceptually, this strategy links market insights, digital engagement, and consumer education to strengthen brand loyalty, increase demand, and establish Indonesia as a global halal food hub. By aligning marketing initiatives with modern consumer expectations, the industry can generate sustainable growth while maintaining ethical and religious integrity.

Addressing human resource challenges is critical for ensuring sustainable growth and operational integrity in the halal industry (Ardiantono et al., 2024; Joeliaty et al., 2020). Strategic HR development requires collaboration between the government, educational institutions, and the private sector to design curricula that are responsive to market needs, including halal supply chain management, auditing, and Sharia-based business ethics. Professional training programs and certifications should target MSME operators and tourism staff to improve their knowledge of compliance procedures, cleanliness standards, and operational best practices (Muhammad et al., 2025). Mentorship programs, workshops, and knowledge transfer led by experts will ensure competency development that combines technical proficiency with a deep understanding of Sharia values (Hidayah et al., 2024). Conceptually, this strategy intersects workforce education, professional capacity building, and industry-specific training to create skilled human capital capable of maintaining product integrity, operational excellence, and consumer confidence. By investing in competent human resources, Indonesia can overcome current workforce limitations, foster innovation, and ensure the halal industry's long-term competitiveness in domestic and international markets (Ellahi et al., 2025; Ghali & Chia-Hua, 2025).

Digitalization is a transformative strategy for addressing fragmentation, improving operational efficiency, and ensuring product authenticity in the halal industry (Purusottama et al., 2023; Sunmola et al., 2025). Technologies such as blockchain enable end-to-end traceability of halal products, assuring consumers of authenticity and compliance at every stage of the supply chain (Ellahi et al., 2025; Hidayah et al., 2024). Additionally, the development of digital platforms, including halal e-commerce, tourism booking systems, and integrated supply chain management solutions, streamlines business processes and expands market reach (Harsanto et al., 2024). Artificial intelligence can support data-driven decision-making, analyze consumer behavior, predict demand trends, and optimize operational strategies. Conceptually, this strategy integrates technology adoption, process efficiency, and data analytics, linking back to regulatory, marketing, and HR strategies to create a connected and modern halal supply chain ecosystem. Comprehensive digitalization not only reduces operational complexity but also enhances global competitiveness, transparency, and consumer trust, ensuring that Indonesia can sustainably expand its presence in the international halal market while meeting both religious and quality standards (Nugroho et al., 2024; Sunmola et al., 2025).

Conclusion

This study concludes that achieving Indonesia's aspiration to become a global halal hub requires strategic efforts to address several critical challenges, including weak inter-agency coordination, the complexity of halal certification for micro, small, and medium enterprises (MSMEs), and the limited availability of qualified human resources. Overcoming these barriers demands integrated regulatory reforms, stronger institutional collaboration, and the acceleration of digital transformation within the halal ecosystem. In practical terms, these findings underscore the importance of stakeholder

synergy, where the government plays a central role in establishing an efficient, adaptive, and inclusive halal industry framework, while MSMEs are encouraged to strengthen their digital capabilities, improve managerial competencies, and enhance product competitiveness to succeed in both domestic and international halal markets. Nevertheless, this study is subject to several limitations, particularly its reliance on qualitative secondary data, which constrains its ability to capture regional micro-level dynamics and direct perspectives from key stakeholders. Furthermore, the absence of quantitative measures limits the assessment of the economic impact of the proposed strategies. Therefore, future research is recommended to adopt mixed-method or quantitative approaches using primary data collected through surveys and in-depth interviews with MSMEs, consumers, and industry actors, in order to validate policy recommendations, better understand market preferences, and provide empirical evidence on the economic effectiveness of halal industry development strategies in Indonesia.

Declaration of generative AI and AI-assisted technologies in the writing process

The authors declare that Artificial Intelligence (AI) tools, including ChatGPT and Grammarly, were used in the preparation of this manuscript exclusively for translation from Bahasa Indonesia into American English and for enhancing language clarity and readability. These tools were not used to generate scientific content, analysis, or interpretation. All outputs were thoroughly reviewed, revised and validated by the authors. The authors take full responsibility for the accuracy, integrity, and final content of this manuscript.

Author contribution

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 Formal analysis: Yudhistira Ardana.
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