



Halal industry as Indonesia's new economic engine: The role of Mutual Recognition Agreements

Evita Manthovani^{1,2}, Frendy Ahmad Afandi^{2,*}, Susi Susyanti², Dias Indrasti^{3,4}, Lili Indriani², Gita Permatasari², and Nichanan Khankasikam⁵

¹Senior Advisor on Productivity Enhancement and Economic Competitiveness, Coordinating Ministry for Economic Affairs, Jl. Lapangan Banteng No. 2-4, Jakarta, 10710, Indonesia

²Bureau of Performance Management and Cooperation, Coordinating Ministry for Economic Affairs, Jl. Lapangan Banteng No. 2-4, Jakarta, 10710, Indonesia

³Department of Food Science and Technology, IPB University, IPB Dramaga Campus, Bogor, 16680, Indonesia

⁴Halal Science Center, International Research Institute for Food, Nutrition and Health, IPB University, IPB Baranangsiang Campus, Bogor, 16143, Indonesia

⁵Institute of Future Studies for Development, Bangkok, Thailand

ABSTRACT

The acceleration of halal certification is a strategic policy issue in the global Islamic economy during the rise of cross-border demand for halal products. Only 28.8% of food and beverage enterprises in Indonesia had obtained halal certification as of February 11, 2025, despite the country's strategic position in the global market. Therefore, this study aims to examine the role of Mutual Recognition Agreements (MRA) in facilitating halal certification with a particular focus on food and beverage products through regulatory harmonization. MRA documents and international halal regulatory frameworks are analysed using an empirical qualitative method, supported by semi-structured interviews with halal certification stakeholders. The results suggest that MRA is expected to streamline procedures, avoid duplication, and improve efficiency, particularly in cross-border certification. However, the effectiveness is constrained by differences in Sharia interpretation, uneven testing infrastructure, and coordination challenges. MRA can support more efficient halal certification when reinforced by institutional capacity building and digitalized certification systems.

ARTICLE INFO

Keywords:
Global trade
Halal certification
Harmonization of standards
Islamic economics
Mutual Recognition Agreement

History:
Received 30-05-2025
Revised 28-08-2025
Accepted 31-08-2025

1 Introduction

In recent decades, the halal industry has evolved from a faith-based compliance system into a strategic sector within global trade, driven by the expanding consumer market globally and the deeper integration of value chains. Halal certification has increasingly functioned as a religious assurance mechanism and a regulatory instrument shaping market access, competitiveness, and cross-border trade with the global halal market projected to reach USD 2.8 trillion by 2025 (SGIE 2023). As consumer awareness of Sharia-compliant products increases, halal certification has become a critical non-tariff requirement in international markets, including non-Muslim-majority regions such as Europe, North America, and East Asia.

The expansion of the halal industry is constrained by regulatory fragmentation across jurisdictions. Divergent halal standards, varying Sharia interpretations, and heterogeneous certification procedures across countries generate high transaction costs and regulatory uncertainty, particularly for small and medium-sized enterprises (SMEs) (Hanzaee & Ramezani 2011). From an international trade perspective, these differences function as non-tariff barriers, limiting access to the export market and weakening global value chain integration. The absence of mutual recognition among halal certification bodies increases duplication of audits, delays in market entry, and inefficiencies in regulatory compliance.

Mutual Recognition Agreements (MRA) have been reported as a governance mechanism to reduce regulatory barriers by enabling cross-border recognition of conformity assessment systems. In the broader literature on regulatory governance and trade facilitation, MRA are widely recognized as instruments required to enhance regulatory cooperation, reduce compliance costs, and promote market integration. However, the application remains underexplored and conceptually underdeveloped, particularly in relation to Sharia-based regulatory systems that differ

fundamentally from conventional technical standards.

Indonesia presents a critical but understudied case in the debate. Despite the high Muslim consumer base and growing halal ecosystem, Indonesia has not fully capitalized on global halal trade opportunities due to the limited international recognition of the certification framework. In strengthening halal certification, MRA is a strategic governance challenge that intersects religious authority, regulatory legitimacy, and international trade diplomacy (Wibowo *et al.* 2024).

Existing studies largely focus on halal consumer behavior, certification credibility, or general standard harmonization, while paying limited attention to MRA as a distinct regulatory instrument within the halal governance architecture. Moreover, the literature rarely integrates halal certification discussions with established theories of international trade and regulatory governance. This study addresses the gap by positioning MRA as a bridge between halal regulatory systems and global trade facilitation.

Based on the above description, this study advances the literature through the following original contributions. Halal certification MRA is reconceptualised as a form of regulatory governance, extending MRA analysis beyond conventional technical standards to Sharia-based regulatory systems. The concept integrates insights from international trade theory by framing fragmented halal certification regimes as non-tariff barriers that affect market access, transaction costs, and SME participation in global value chains. An in-depth Indonesia-focused analysis is provided to address a significant empirical gap in the literature, which has predominantly emphasized Middle Eastern or developed-country contexts. Institutional, regulatory, and interpretative Sharia challenges are also identified to condition the effectiveness of MRA, contributing to the understanding of regulatory cooperation in faith-based markets. Policy-relevant implications that link halal certification MRA to trade facilitation strategies and global competitiveness are developed, offering a framework applicable beyond the Indonesian case.

*Corresponding author.

E-mail addresses: frendystp@gmail.com



2 Methodology

This study was designed as an empirical qualitative analysis, rather than a normative policy essay or narrative review. MRA function in practice was investigated to facilitate halal certification processes, with a particular focus on inter-regulatory coordination, implementation challenges, and perceived efficiency gains. Data were collected from two primary sources, official document materials and key stakeholders. First, document analysis was conducted on official texts, bilateral and multilateral halal recognition agreements, international halal certification guidelines, and regulatory reports issued by national and transnational halal certification authorities. These documents were selected purposely based on the relevance to cross-border halal certification and regulatory cooperation. Second, semi-structured interviews were carried out with key stakeholders, including halal auditors, representatives of certification bodies, and private sector entities engaged in cross-border trade in halal-certified products. Participants were selected using purposive sampling to capture diverse perspectives from regulatory, technical, and industry viewpoints. All interviews were conducted during the study period and focused on practical experiences with MRA implementation, perceived benefits, operational constraints, and coordination mechanisms among certifying bodies.

Data analysis followed a thematic analysis method. Interview transcripts and documents were first subjected to open coding to identify recurring concepts of certification processes, duplication, costs, time efficiency, and regulatory harmonization. These codes were grouped into higher-order themes through axial coding, allowing patterns and relationships between regulatory frameworks and implementation outcomes to be systematically examined. To enhance analytical rigor, coding was conducted iteratively, and themes were continuously refined through comparison across data sources. Ethical considerations were observed throughout the study process. All interviewees provided informed consent before data collection, and confidentiality was maintained by anonymizing individual identities and institutional affiliations.

3 Halal Certification and Its Significance

According to Statistics Indonesia, the number of food and beverage enterprises in Indonesia reached 4,854,311 units in 2023 (BPS 2024). In the same period, the Halal Product Assurance Organizing Agency (BPJPH) record showed that 1,398,617 food and beverage enterprises had obtained halal certification. Based on these official figures, halal-certified food and beverage enterprises account for approximately 28.8% of the total. Therefore, certification coverage remains below half of the total sector (BPS 2024). Government Regulation No. 39 of 2021 mandates compulsory halal certification for food and beverages that comes into effect on 17 October 2024. BPJPH records show that the government's policy target of issuing 10 million halal certificates in 2024 had issued 1,830,445 certificates, covering 4,556,892 certified products below the target. Considering this gap, regulatory simplification for micro and small enterprises (MSEs) has been formally extended to October 2026, as stipulated in subsequent implementing regulations (BPJPH 2024).

Several policy instruments contribute to the acceleration of halal certification. Across existing regulatory documents and policy statements, consistent evidence suggests that MRA, slaughterhouse readiness (RPH), and other facilitative mechanisms are envisioned as complementary pathways to increase uptake of halal certification (BI 2023). However, the relative contribution of these mechanisms often cited in policy discourse as approximate percentage ranges should be interpreted as indicative policy estimates rather than empirically measured impacts since no standardized quantitative evaluation framework has been established (Government Regulation No. 42 of 2024). Under this regulation, halal certificates for imported food, beverages, slaughter products, and slaughter services processed through MRA mechanisms are targeted for completion by 17 October 2026.

Halal certification plays a critical role in supporting the growth of the global Islamic economy. The halal food sector accounted for US\$1.43 trillion in Muslim consumer spending in 2023 and is projected to reach around US\$1.94 trillion by 2028. (SalaamGateway 2025; DinarStandard 2025). Demand for broader halal products continues to expand across food, beverages, cosmetics, and services, driven by population growth and increasing consumer awareness of quality and safety attributes. The certification process is frequently characterized as complex and time-consuming due to ingredient testing, supply chain audits, and compliance with heterogeneous Sharia standards across jurisdictions (Hanzaee & Ramezani 2011). These challenges disproportionately affect SMEs, which often face financial and administrative constraints when pursuing certification across multiple export markets.

Beyond cost and time considerations, inconsistencies in halal standards across countries complicate certification processes. Even though countries such as Indonesia and Malaysia apply comprehensive halal regulatory frameworks with centralized certification authorities, other jurisdictions adopt less formalized or fragmented methods (Lever & Miele 2012). The divergence of certification standards across markets leads to

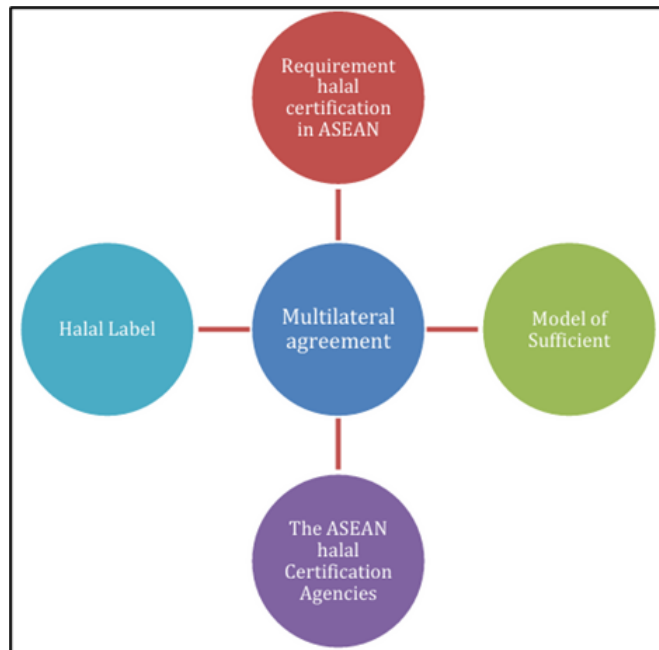


Figure 1: Halal certification cooperation system at the ASEAN level

procedural duplication for exporters, reducing trade efficiency and limiting market access opportunities. In this context, MRA has been increasingly discussed as an institutional mechanism to address regulatory fragmentation. This mechanism enables the mutual acceptance of halal certification systems and conformity assessment procedures, reducing the need for repeated certification in destination markets (Fischer 2016). Existing studies suggest that effective implementation may lower certification-related transaction costs and reduce non-tariff barriers in halal trade, even though the magnitude of the effects varies by institutional capacity and governance arrangements (Islamic Development Bank 2021). This study examines MRA as a potential catalyst for accelerating halal certification to identify regulatory conditions and best practices supporting greater convergence of halal standards and more inclusive participation in global trade. At the regional level, ASEAN has been identified as a feasible entry point for MRA development. Previous studies reported the potential establishment of regional accreditation arrangements, shared registration systems, and coordinated halal standards as foundational elements for ASEAN-level halal cooperation (Yuanitasari *et al.* 2023).

Figure 1 shows an ASEAN-level halal certification cooperation framework centered on a multilateral agreement as the main coordinating mechanism. The model links harmonized halal certification requirements, standardized halal labelling, the institutional role of ASEAN halal certification agencies, and a model of sufficiency that defines minimum standards for mutual recognition. This framework shows the reduction of regulatory fragmentation without requiring full standard uniformity. In line with the result, the figure reports the policy relevance of ASEAN-based MRA in reducing procedural duplication, improving administrative efficiency, and supporting cross-border halal trade, while emphasizing the need for institutional coordination and baseline standard convergence to ensure effective implementation.

4 Concepts and Principles of MRA in Halal Certification

MRA is an agreement between countries or inter-agency certification to mutually recognize halal certification standards, procedures, and results, minimizing the need for retesting in export destination countries (Fischer 2016). The concept is rooted in the principle of harmonization and mutual trust, where the participating countries or institutions agree to accept halal certificates issued by other parties. In the context of halal certification, MRA simplifies processes, reduces costs, and accelerates market access for halal products (Hanzaee & Ramezani 2011). This method is particularly relevant given the complexity of global supply chains including different jurisdictions with different halal regulations.

The main principles of MRA in halal certification include standardization, process transparency, and auditor competence. Standardization ensures that the halal requirements in countries or institutions with MRA have a comparable level of Sharia compliance but may differ in technical details (Lever & Miele 2012). Process transparency requires each party to disclose information related to certification procedures, including testing methods and auditing criteria. Auditor competence is a key element in ensuring that the issued certifications can be trusted by all parties. For example, Malaysia has implemented MRA with several countries to facilitate the export of halal products, with an emphasis on standardized auditor training (Abdul *et al.* 2014).

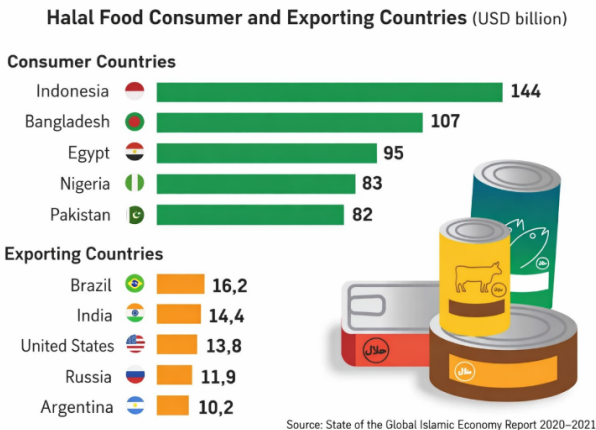


Figure 2: Halal food consumer and exporter countries

Even though MRA concept offers great potential, the implementation requires a strong commitment to address differences in Sharia interpretation and regulatory variations across countries. For example, differences in the definition of ingredients considered halal or haram increase the difficulty of harmonizing standards (Hanzaee & Ramezani 2011). Therefore, MRA is often supported by international bodies, such as the Organization of Islamic Cooperation (OIC) or the Standards and Metrology for Islamic Countries (SMIIC), to establish common guidelines. With these principles, MRA facilitates the trade of halal products and strengthens global consumers' confidence in the integrity of halal certification. The legal framework enabling Indonesia's participation in international cooperation on halal certification is established under Government Regulation No. 42 of 2024 on Halal Product Assurance, ratified on October 17, 2024. The regulation explicitly addresses this mechanism in Article 141, paragraphs (1)–(3), which recognize conformity assessment through mutual recognition and mutual acceptance. Conformity assessment in the form of scheme development carried out in the national and local levels with the inclusion of the Halal Product Assurance Organizing Agency (BPJPH) and local accreditation bodies.

Figure 2 shows a discernible asymmetry between major and leading halal food exporting countries in the global market. Indonesia, Bangladesh, Egypt, Nigeria, and Pakistan are reported as the largest halal food consumers. Indonesia accounts for USD 144 billion in consumption. In contrast, the principal exporters, namely Brazil, India, the United States, Russia, and Argentina, are predominantly non-Muslim-majority countries, with values substantially lower than the consumption levels observed in major Muslim markets. This imbalance suggests a structural gap in the global halal food supply chain, where demand is concentrated in Muslim-majority countries while supply is dominated by exporters with advanced agri-food industries and robust certification infrastructures. The figure shows the strategic importance of halal certification systems and regulatory recognition mechanisms in facilitating cross-border trade. In this context, harmonized standards and MRA become critical instruments for reducing certification barriers, enhancing market access, and enabling consumer countries within ASEAN to strengthen the position in the global halal value chain. Broader cooperation with non-Muslim countries is beneficial to leverage local food and beverage industries through investment and technology transfers in the food-tech industry, where cooperation can focus on technology transfer to improve the development of halal standards. Meanwhile, cooperation with Muslim countries aims to improve the quality



Figure 3: Flow of MRA preparation (BPJPH 2023)

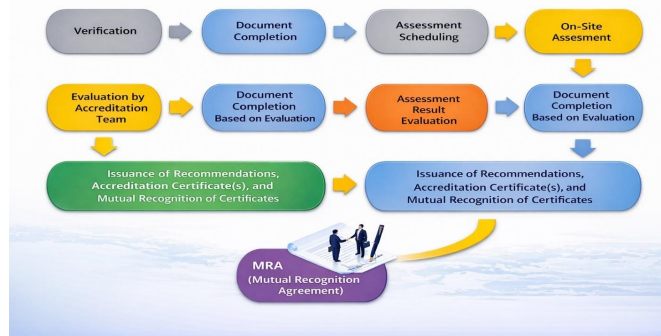


Figure 4: Technical process of phasing MRA (BPJPH 2023)

of halal certification and strengthen the position in the global halal market (Wibowo *et al.* 2024).

Recognising the fragmentation of halal standards, MRA is reported as a critical mechanism in facilitating international trade. The following outlines the operational flows and the corresponding materials necessary drawn from meta-analyses method across multiple studies and reports. The promotion of MRA was formed for mutual recognition and acceptance of the conformity assessment with the following flows.

International frameworks for halal certification cooperation, showing the sequential process of Memorandum of Understanding (MoU) execution, assessment and accreditation of halal certification systems, as well as the establishment of Mutual Recognition Arrangements lead to mutual acceptance across the jurisdiction. MRA process facilitating agreements between countries is reported in the process flowchart below.

Figure 4 shows a structured accreditation and mutual recognition workflow that integrates administrative verification, technical assessment, and iterative corrective actions to ensure conformity and international equivalence. The process begins with document verification and submission, followed by assessment scheduling and on-site evaluation to validate the implementation of documented procedures and institutional competence. The results from the on-site assessment are addressed through corrective document fulfilment and subsequent evaluation, reflecting a continuous quality assurance mechanism. Final review by the accreditation team leads to the issuance of recommendations, accreditation certificates, and mutual recognition certificates, leading to participation in MRA. This framework shows a systematic governance model that enhances regulatory trust, reduces duplication of assessments, and supports cross-border acceptance of certification outcomes.

The stages outlined show that MRA provides the basis for halal certification bodies from different countries to recognize the results of counterparts' audits and certifications, reducing the duplication of processes, lowering costs, and accelerating market access for halal products (Fischer 2016). Business actors do not need to repeat the certification process in each export destination country, leading to time and resource efficiency. In addition, MRA has the potential to increase global consumer confidence in the integrity of halal products through the harmonization of internationally recognized standards. Data from the Overseas Halal Institution (LHLN) shows that 28 countries have established 64 MRA agreements, reporting the dynamics of international cooperation in the recognition of halal certificates, with LHLNs actively establishing partnerships to promote inclusive and transparent trade in halal products. The pattern of collaboration also reflects the geopolitical and economic priorities of each country in the global halal industry.

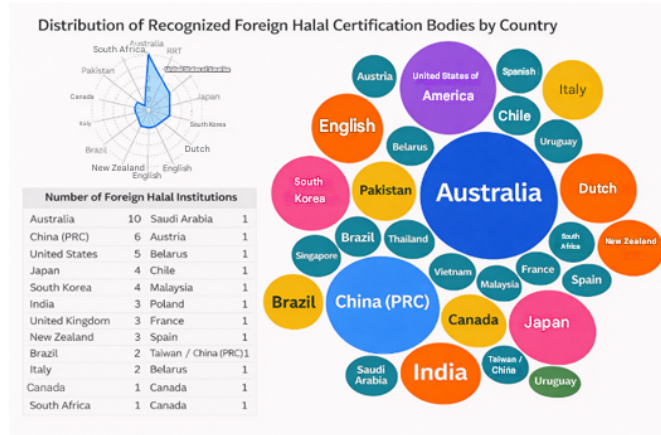


Figure 5: Number of foreign halal institutions by country that has MRA (BPJPH 2024)

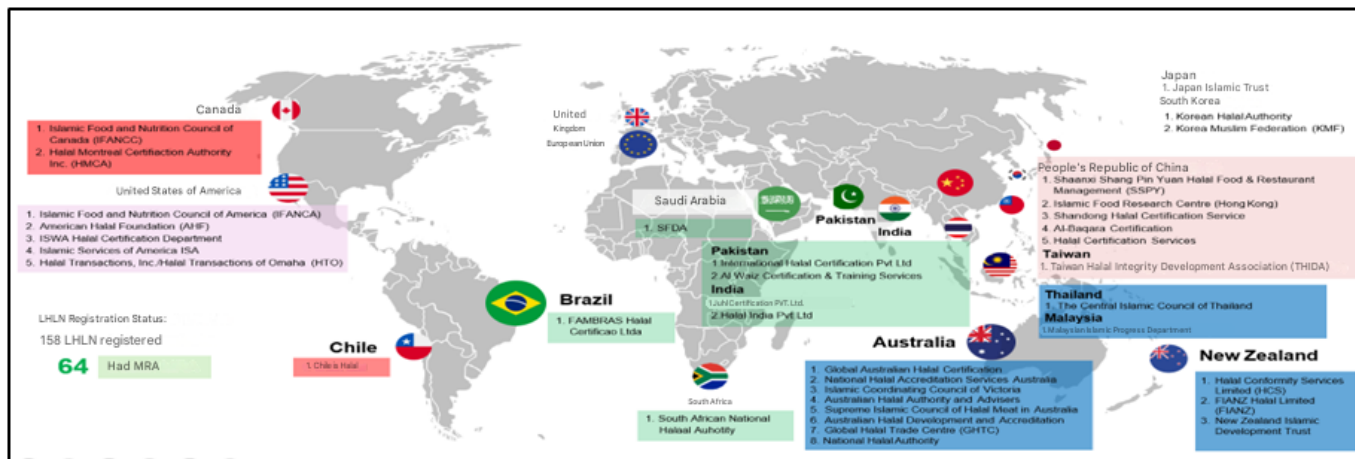
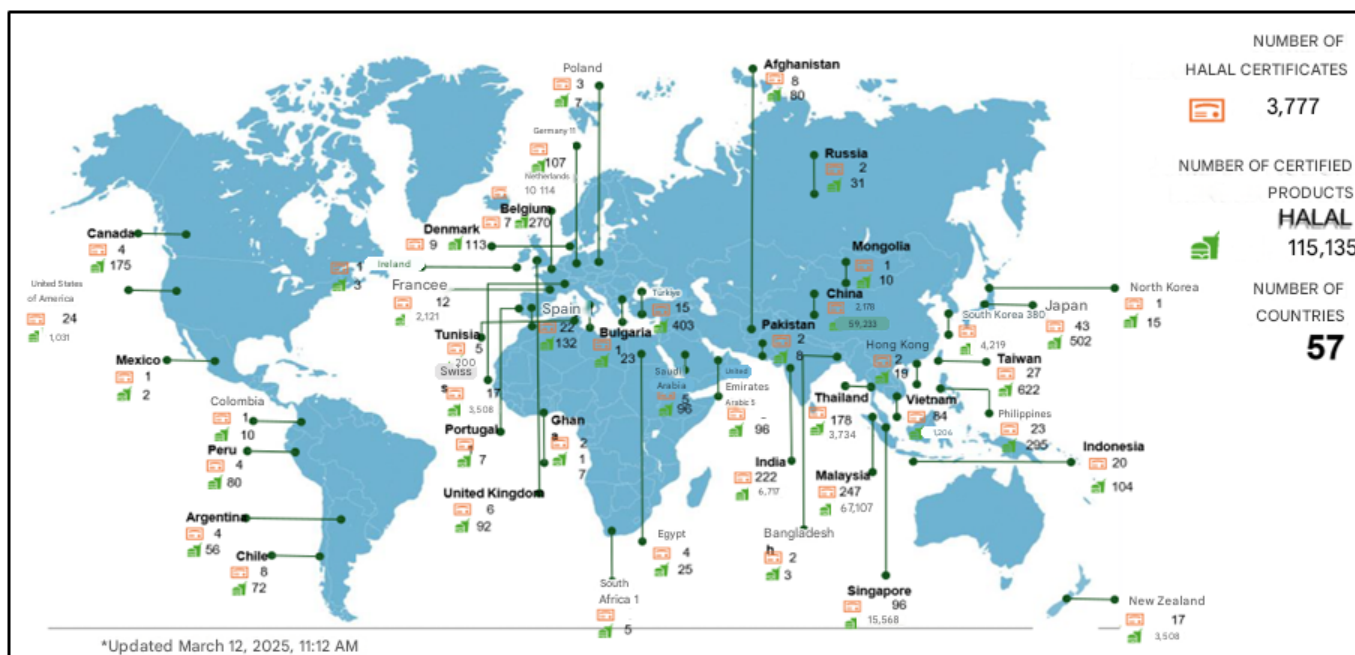


Figure 6: Foreign halal institutions registration status based on the country that has an MRA (BPJPH 2024)



recurrent challenges in the literature. MRA requires sustained cooperation among certification bodies, national regulators, and international organizations, including the OIC, to develop and maintain mutually accepted certification frameworks (Abdul *et al.* 2014). However, empirical studies suggest that differences in regulatory priorities, administrative capacity, and negotiation dynamics may impede the formalization and implementation of MRA. Addressing these issues typically requires structured multilateral dialogue and clearly defined oversight mechanisms to ensure consistent application of agreed standards.

Evidence from country-specific studies shows the implementation of MRA in practice. For instance, Musafak *et al.* (2024) examined Indonesia's MRA cooperation with South Korea, stating that three out of five halal certification bodies in South Korea, including the Korea Muslim Federation (KMF), the Korea Halal Authority (KHA), and the Korea Testing Certification Institute (KTC), formally established an MRA with BPJPH. This case shows that the participation varies across institutions even within the same country and can be shaped by regulatory readiness and institutional consistency rather than uniform national preferences.

Concerns regarding post-certification surveillance have been raised in recent empirical studies. Azizah *et al.* (2025) emphasized that insufficient supervision of MRA-certified products increased the risk of non-compliance in the market. This concern is reflected in documented cases where laboratory findings detected porcine contamination in imported processed food products, including items that had already obtained halal certification and labeling, indicating inconsistencies between certification status and actual product content (BPJPH 2025; Rohmah 2025). These cases show the importance of monitoring and enforcement mechanisms with the implementation of MRA. Quantitative empirical evidence from Rusdiyana *et al.* (2023) provided further insight into the relative importance of institutional factors in halal product assurance. The results suggest that infrastructure (0.297), interrelation among institutions (0.271), regulation (0.256), and technical factors (0.176) are key determinants for ensuring the effectiveness of halal product assurance by deploying Analytical Network Process (ANP) to model the problem of implementing halal product assurance. The interrelation component, which includes cross-border cooperation mechanisms such as MRA, exhibits a substantial weight (0.310). Therefore, the absence or limited implementation remains a significant constraint. MRA cooperation should be strengthened as part of a broader strategy to improve halal certification governance.

7 Case Study: MRA Practice in Muslim Countries

Malaysia is a pioneer of MRA implementation for halal certification by collaborating with several countries such as Indonesia, Thailand, and Australia. MRA allowing the recognition of halal certificates between countries has been developed through the Malaysian Department of Islamic Development (JAKIM) (Abdul *et al.* 2014). For example, MRA between Malaysia and Indonesia has reduced the certification time for processed food products, allowing SMEs to export at a lower cost. This success is supported by standardized auditor training and a strong testing infrastructure, but challenges such as technical differences in halal standards need to be addressed (Hanzaae & Ramezani 2011). The halal MRA covers food, cosmetics, pharmaceuticals, tourism, finance, and the digital economy (Hidayati 2023).

In the Middle East, the United Arab Emirates (UAE) has implemented MRA with countries such as New Zealand to facilitate the import of halal products, particularly meat and dairy products. The Emirates Authority for Standardization and Metrology (ESMA) works with certification bodies in New Zealand to ensure that incoming products meet UAE halal standards without the need for re-testing (Fischer 2016). This case study shows that MRA can improve trade efficiency by reducing technical barriers. High confidence is required in the competence of certification bodies in partner countries. However, the implementation of MRA in the UAE faces obstacles related to the harmonization of standards, specifically for non-food products such as cosmetics (Lever & Miele 2012).

Countries with developing Islamic economies, such as Thailand, show how MRA can leverage halal trade in a non-Muslim majority country, despite several factors impeding the effectiveness. Thailand signed an MRA with Malaysia to promote the export of halal products to the global Muslim market. However, the limited number of trained halal auditors and testing infrastructure has raised concerns from partner countries regarding the credibility of the certification (Hanzaae & Ramezani 2011). This case study shows the importance of strengthening technical capacity and coordination between countries to ensure that MRA functions effectively. The experiences of Malaysia, the UAE, and Thailand provide valuable insights into the opportunities and barriers to the implementation of MRA for halal certification.

8 Recommendations for Strengthening the MRA Framework for Global Halal Certification

The above section shows how MRA has been instrumental in addressing regulatory gaps that necessitate duplicative halal certification.

In this context, the implementation is affected by the wide variations of certification requirements. Therefore, an important method to enhance the effectiveness of MRA in increasing halal certification is by strengthening the framework through the harmonization of global standards. Organizations such as the Standards and Metrology for Islamic Countries (SMIC) play a central role in drafting widely accepted halal guidelines, considering the variations in Sharia interpretation between countries (Abdul *et al.* 2014). These recommendations include the establishment of a technical committee, including scholars, fiqh experts, and industry experts, to harmonize the definition of halal ingredients, testing methods, and audit procedures. The harmonization reduces standard conflicts, such as differences in opinion on the halalness of gelatine or enzymes, strengthening confidence in certifications recognized through MRA (Fischer 2016).

Investment in standardized halal auditor training is required to ensure the consistency and credibility of the certification process in addition to harmonizing standards. Many countries lack auditors who have adequate technical competence and understanding of Sharia (Hanzaae & Ramezani 2011). Therefore, international training programs supported by OIC or countries with experience, such as Malaysia, are expected to strengthen auditor capacity and ensure consistency with international standards. The program should include training on modern testing technologies to detect non-halal ingredients, as well as an understanding of relevant sharia principles. MRA can be implemented more effectively to reduce cross-country hesitancy towards partner certification (Lever & Miele 2012).

A complementary strategy includes the digitization of the halal certification process to increase efficiency and transparency within the framework. The use of blockchain-based platforms can enable real-time supply chain tracking and verify the validity of halal certificates (Tieman & van der Vorst 2019). These technologies can address issues such as certificate forgery or data mismatches, which often affects trust. Countries that sign the MRA can develop an integrated digital system for the safe and efficient exchange of certification data. Malaysia can be a model for other countries to implement this solution (Abdul *et al.* 2014).

The establishment of an independent oversight body to oversee the implementation of MRA is important for ensuring compliance with the agreement. This body is tasked with monitoring performance, evaluating the standards applied, and resolving disputes related to the recognition of halal certificates (Hanzaae & Ramezani 2011). Supervisory bodies facilitate dialogue between countries to address challenges such as differences in economic interests or national priorities. MRA serves as a credible and inclusive tool, promoting the participation of more countries in global halal certification cooperation.

Strengthening MRA must be supported by a strong political commitment through multilateral cooperation. Countries with large Islamic economies, such as Indonesia, Malaysia, and Saudi Arabia, can lead initiatives to expand MRA networks. This may comprise non-Muslim countries with thriving halal industries, such as Thailand or New Zealand (Lever & Miele 2012). International forums such as OIC or G20 summits are used to promote MRA as part of the global trade agenda. MRA is a powerful catalyst to increase halal certification and support the growth of the Islamic economy worldwide by combining standardization, auditor training, digitalization, independent oversight, and political cooperation. For example, Indonesia and Malaysia conduct MRA for slaughtered animal products, specifically in terms of additional procedures used after slaughter, such as thoracic sticks (Yustianingsih *et al.* 2024). MRA is useful in facilitating halal certification for Indonesian business actors, expanding the market reach of products, and increasing competitiveness in the priority countries such as Malaysia, Turkiye, the UAE, Thailand, and Saudi Arabia (Ardiyanti *et al.* 2024).

9 Conclusion

In conclusion, MRA increases halal certification by reducing costs, time, and duplication of processes, while improving the competitiveness of products in the global market. Challenges such as differences in Sharia interpretation and infrastructure limitations are addressed through standardization, auditor training, digitalization, and independent oversight, as seen from practices in Malaysia, the UAE, and Thailand. However, the success depends on political commitment, coordination between countries, and investment in technical capacity. By strengthening the framework, MRA supports the efficiency of halal certification, strengthens the global Sharia economy, meets consumer needs, and promotes inclusive and reliable trade in halal products.

Conflict of Interest

The authors declare no conflict of interest.

References

Abdul M, Ismail H, Mustafa M. Halal certification and its impact on export performance: evidence from Malaysia. *Int J Islam Middle East Finance Manag.* 2014;7(1):94–105.

- Akim, Sari VP, Konety N, Nidatya N. Indonesia's global halal hub: competitive strategies for leadership. *J Glob South Stud.* 2024;18(1):29–56.
- Ardiyanti ST, Epianingsih Y, Syarif RI, Putra GW. Analysis of the identification of potential export destination countries of halal products and the potential impact of halal certification policies. *Trade Policy J.* 2024;3:1–19.
- Azizah HN, Ramadhan MA, Utami TF, Hidayati N, Casim RM. Mutual recognition agreements: a gateway to global opportunities or a pathway of challenges in Indonesian halal agri-food economics. *Halal Stud Soc.* 2024;2(1):21–24.
- [BI] Bank Indonesia. Indonesia Halal Economic Report 2022/2023: accelerating the growth of the halal ecosystem. Jakarta: Bank Indonesia; 2023.
- [BPJPH] Badan Penyelenggara Jaminan Produk Halal. Keputusan Kepala Badan Penyelenggara Jaminan Produk Halal Nomor 90 Tahun 2023 tentang Prosedur Pelaksanaan Layanan Registrasi Sertifikat Halal Luar Negeri. Jakarta: BPJPH; 2023. Available at: https://cmsbl.halal.go.id/uploads/Kepkaban_90_2023_Prosedur_Layanan_Registrasi_SHLN_bde2612669.pdf
- [BPJPH] Badan Penyelenggara Jaminan Produk Halal. BPJPH: 17 Oktober 2026 Produk makanan-minuman UMK harus sudah bersertifikat halal, bagaimana dengan produk luar negeri? [Internet]. 2024 [accessed 15 May 2025] Available at: <https://bpjph.halal.go.id/detail/bpjph-17-oktober-2026-produk-makanan-minuman-umk-harus-sudah-bersertifikat-halal-bagaimana-dengan-produk-luar-negeri/>
- [BPJPH] Badan Penyelenggara Jaminan Produk Halal. Produk pangan olahan yang terdeteksi mengandung unsur babi (Porcine) [Internet]. 2025 [accessed 15 May 2025] Available at: <https://bpjph.halal.go.id/detail/siaran-pers>
- [BPS] Badan Pusat Statistik. Food and beverage service activities statistics 2023 (Volume 7). Jakarta: Badan Pusat Statistik; 2024.
- DinarStandard. State of the Global Islamic Economy 2025 (SGIE Report 2024/25) [Internet]. 2025 [accessed 15 May 2025] Available at: <https://www.dinarstandard.com/post/sgier-2024-25>
- Fischer J. The halal frontier: Muslim consumers in a globalized market. London: Palgrave Macmillan; 2016.
- Hanzae KH, Ramezani MR. Intention to halal products in the world markets. *J Islam Mark.* 2011;2(3):260–278.
- Hidayati R. The role of halal industry in driving bilateral economic diplomacy between Indonesia and Turkiye. *Islamic Economics and Business Review.* 2023;2(2):96–107.
- Islamic Development Bank. Halal industry development report. Jeddah: IsDB Group; 2021.
- Lever J, Miele M. The growth of halal meat markets in Europe: an exploration of the supply chain and consumer demand. *Food Cult Soc.* 2012;15(4):547–567.
- Musafak M, Yoo D, Akhmadi H. The institutionalization of halal certification in South Korea: multidimensional dynamics of challenges and opportunities. *ASEAN J Halal Ind.* 2024;1(1):1–18.
- Rohmah FN. Menelusuri penyebab produk halal tercemar kandungan babi [Internet]. 2025 [accessed 15 May 2025] Available at: <https://tirto.id/menelusuri-penyebab-produk-halal-tercemar-kandungan-babi-haRg?>
- Rusdiyana AS, Ruhana AS, As-Salafiyah A. Problems in the implementation of halal product assurance in Indonesia: an analysis of halal governance. *Harmony.* 2023;22(1):167–186.
- SalaamGateway. The Global Islamic Economy 2024/25 overview: Muslim consumer market size and trajectory [Internet]. 2025 [accessed 15 May 2025] Available at: <https://salaamgateway.com/story/the-global-islamic-economy-202425-overview-muslim-consumer-market-size-and-trajectory>
- [SGIE] State of the Global Islamic Economy. The global Islamic economy report 2023/2024. Dubai: DinarStandard; 2023.
- Tieman M, van der Vorst JGAJ. Developing a traceability system for halal supply chains. *J Islam Mark.* 2019;10(4):1248–1267.
- Wibowo DE, Soeharto A, Taufiq, Kunantiyorini A, Prematura AM, Begishev I. Internationalization of halal product assurance standards in Indonesia in ensuring consumer rights: implications and orientation. *J Legal Voices.* 2024;6(2):356–384.
- Yuanitasari D, Sardjono A, Susetyo H. The establishment of ASEAN halal certification agencies: initial strategies for the uniformity of halal certification in ASEAN. *J Law Sustain Dev.* 2023;11(11):1–23.
- Yustianingsih L, Mufid A, Maifiah MHM, Gunawan S. A comparative study of halal management systems in Indonesia and Malaysia. *Halal Res.* 2024;4(3):28–44.