

INTEGRATING HALAL SUPPLY CHAIN MANAGEMENT AND HALAL VALUE CHAIN: A BIBLIOMETRIC ANALYSIS AND FUTURE RESEARCH

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Abstract

Ensuring halal integrity in the food sector requires operational Halal Supply Chain Management (HSCM) to be joined with the Halal Value Chain (HVC). The two literatures have grown side by side. This study maps that separation and synthesizes evidence on drivers, barriers, and critical control points under Indonesia's mandatory assurance regime. Searches of Scopus, Web of Science, ScienceDirect, and Google Scholar, updated on 1 September 2026, cover 2016–2026. The consolidated export contains 200 records, with dated items running from 2018 to 2026 and concentrated in 2023–2026. Keyword co-occurrence in VOSviewer is combined with thematic synthesis. Halal (102 occurrences), halal supply chain (45), halal supply chain management (49), and supply chain (28) form one cluster. Halal value chain stands apart, with 18 occurrences. The mean publication year of these terms lies between 2023.9 and 2024.5. Integrity is located at procurement, processing, logistics, warehousing, and retailing, and the evidence is strongest for procurement and processing. Regulatory mandate, consumer trust, market access, and ethical responsibility drive adoption. Investment requirements, uneven logistics, limited small-firm readiness, weak raw-material traceability, and early-stage digital tools constrain it. Law No. 33 of 2014 and the Halal Product Assurance Organizing Agency have made the five nodes a condition of lawful circulation, while firm routines still lag the statute. Further work should estimate HSCM practice and value-chain participation in one model and measure logistics and warehousing as distinct nodes.

Keywords: Halal supply chain management; Halal value chain; Food industry; Bibliometric analysis

INTRODUCTION

The global halal food sector has expanded from a specialized religious market into a trade domain that shapes how food is produced, certified, and distributed (Hasan, 2021). In Indonesia, that expansion is visible both in Muslim consumers' attentiveness to the halal status of food and in the competitiveness of local halal products in international markets (Aziz, 2025; Charina & Charisma, 2023; Maulana & Jafar, 2025). The analytical consequence is a change in the unit of assurance. Halal status is now located in the way a product is sourced, transformed, and delivered, extending beyond verification of the finished good alone (Arum, 2023; Maknunah et al., 2020). The corresponding managerial movement runs from compliance with the

halal substance of a product toward an ecosystem of halal supply chain practice (Nurhayati & Hasanuddin, 2026). Its spatial form is an upstream-to-downstream, or farm-to-fork, obligation: integrity has to hold from the origin of raw materials to the point of consumption (Analia, 2026; Ihsan et al., 2026). Halal supply chain management (HSCM) states that obligation in operational terms, as sharia-compliant control over flows of materials, processes, and logistics. The halal value chain (HVC) states it in ecosystem terms, as the coordinated activities through which halal value is created and through which products compete in food and adjacent halal sectors (Asri & Ilyas, 2022; Aziz, 2025). The two constructs address a single integrity problem at different levels of analysis. Published work still tends to elaborate them on separate tracks.

The food sector shows why that separation is consequential. Contamination, commingling, and loss of product identity can arise at procurement, processing, warehousing, logistics, and retailing, and a breach at any one node compromises assurance established elsewhere. Procurement is the first control point. Studies of small food producers and traditional-market processors report raw materials of uncertain halal status, together with routines that cover only part of the required chain, including halal procurement, production, storage, and logistics (Budiman & Putri, 2025; Gusriyanti, 2026). Storage and movement extend the exposure. Halal logistics, understood as management of the flow through to the end of the chain in line with halal requirements, is not yet widely understood or applied across Indonesian food distribution (Fuad & Atmawati, 2025; Prasetyo & Jasmine, 2022). Downstream stages carry a distinct risk. Criteria for assessing halal supply-chain risk in the downstream meat chain remain underdeveloped (Rishelin et al., 2023), and restaurants and retail outlets have to govern preparation, storage, and sale as halal activities in their own right (Amelia et al., 2023; Burhan, 2025). Traceability is the literature's principal response, because halal status must be demonstrable along the chain. Supply Chain Operations Reference (SCOR) designs, structured models of halal traceability systems, and frameworks that join halal assurance to risk-based quality management are directed at that requirement (Dilla & Fathurohman, 2021; Haryono & Handayani, 2018; Hidayati et al., 2025). Implementation evidence indicates that these controls are only partly institutionalized. Halal supply-chain practice in Indonesian food enterprises remains uneven, and certification is still treated as a problem of managerial adoption (Azwar & Sapa, 2025; Kristiana et al., 2020). Performance studies add that selected dimensions of HSCM are significantly associated with the sustainable performance of micro, small, and medium food enterprises (Jannah & Wijayanti, 2025).

Indonesia is the jurisdiction in which this operational problem has been written into public law and into an explicit industrial strategy. Law No. 33 of 2014 on Halal Product Assurance (Jaminan Produk Halal) requires products that enter, circulate, and are traded in Indonesia to be halal-certified, and it establishes the Halal Product

Assurance Organizing Agency (Badan Penyelenggara Jaminan Produk Halal, BPJPH) as the state authority responsible for organizing that assurance (Maulana & Jafar, 2025; Undang-Undang Republik Indonesia Nomor 33 Tahun 2014 Tentang Jaminan Produk Halal, 2014). The mandate is implemented in phases by product category. Food and beverage form the priority cluster, so that the principal consumption market is brought under the statute while inspection capacity and enterprise readiness continue to develop (Nurhayati & Hasanuddin, 2026; Rusdiana, 2026) . The statute also reorganizes an assurance system previously centered on voluntary certification. BPJPH administers registration, certification, and supervision. Examination is undertaken by Halal Inspection Bodies (Lembaga Pemeriksa Halal), including the Assessment Institute for Foods, Drugs, and Cosmetics of the Indonesian Council of Ulama (LPPOM MUI). The Halal Assurance System criteria codified as HAS 23000 remain a principal reference for identifying the materials, facilities, and procedures that enterprises must keep under halal control. Scholarly discussion connects this legal architecture to a national ambition: to establish Indonesia as an integrated halal zone and a hub of the global halal sector through the implementation of halal supply chains (Hasan, 2021; Nurhayati & Hasanuddin, 2026) . Instruments treated in the literature include halal logistics standards oriented to global logistics requirements, integrated information systems for product traceability, and ecosystem support for industry development (Afifah & Miftah, 2026; Asri & Ilyas, 2022; Prasetyo & Jasmine, 2022) . Designated national halal industrial parks belong to the same spatial strategy, clustering certified production with logistics and inspection services. Readiness research measures the distance between this architecture and present capability. Advances in regulation, including the implementation of Law No. 33 of 2014, have yet to produce a halal value-chain ecosystem capable of carrying local food products competitively into global markets (Azwar & Sapa, 2025; Maulana & Jafar, 2025) .

A comprehensive synthesis is timely because the research base has widened without a corresponding integration of its two core constructs. Output is concentrated in site-specific studies of HSCM in food processing, traditional markets, and micro, small, and medium enterprises, and in a parallel literature that treats the HVC as a strategy for industrial competitiveness (Analia, 2026; Charina & Charisma, 2023; Gusriyanti, 2026) . Narrative reviews have begun to consolidate implementation lessons for the Indonesian food industry (Findayani & Masrurah, 2026) . Bibliometric analysis has begun to map sustainable halal supply chains in small and medium industries and has called for closer empirical identification of challenges and opportunities in Indonesia (Fajrah et al., 2025) . Studies of the value chain locate the roots of weak implementation beyond the technical layer of production (Zahra & Tsalas, 2026). These strands have yet to supply the review that the present policy moment requires. The explicit gap has three parts. HSCM and HVC have yet to be synthesized as one framework linking operational integrity to value creation and to

hub competitiveness. Evidence on vulnerabilities remains distributed across individual nodes and has yet to be read systematically against Indonesia's phased certification regime and its institutions. The field has yet to set out a research agenda that separates established findings on drivers, barriers, and critical control points from the questions an integrated HSCM–HVC model still needs to answer.

This review addresses that gap. It combines a systematic literature review with bibliometric structuring and narrative synthesis in pursuit of four objectives. The first is to clarify the conceptual relationship between HSCM and HVC and the way the two constructs relocate halal integrity from the product certificate to the full chain. The second is to organize food-sector evidence on drivers, barriers, and critical control points across procurement, processing, logistics, warehousing, and retailing. The third is to interpret those findings within Indonesia's regulatory and institutional landscape—Law No. 33 of 2014, BPJPH, LPPOM MUI and HAS 23000, and the halal-hub strategy that includes national halal industrial parks—so that arguments developed in the global supply-chain literature are examined in a mandatory-assurance setting. The fourth is to propose a future research agenda for an integrated HSCM–HVC framework. The contribution is a structured account of where the literature converges, where it remains fragmented, and which questions should guide the next stage of research on halal integrity.

RESEARCH METHOD

This study is a systematic literature review of halal supply chain management (HSCM) and the halal value chain (HVC) in the food sector. The design follows the planning, conducting, and reporting sequence used for reviews in management (Tranfield et al., 2003) and the identification, screening, eligibility, and inclusion logic of the PRISMA 2020 statement (Page et al., 2021). The objectives call for a description of how the field is structured and for an interpretation of integrity, institutions, and research gaps. Bibliometric mapping is therefore combined with qualitative thematic synthesis (Braun & Clarke, 2006; Donthu et al., 2021). The steps below correspond to the four objectives stated in the introduction.

Search Strategy

Searches covered Scopus, the Web of Science Core Collection, ScienceDirect, and Google Scholar, and were updated on 1 September 2026. The publication window is 2016–2026, the ten years preceding that date. Scopus, Web of Science, and ScienceDirect were used to retrieve internationally indexed journal research. Google Scholar was searched in parallel, because a large share of the empirical work on Indonesia's mandatory halal regime appears in national peer-reviewed journals that the international indexes cover only in part. The English search string joined chain and integrity terms to the food sector: ("halal supply chain" OR "halal supply chain management" OR "halal logistics" OR "halal value chain" OR "halal integrity" OR "halal

traceability") AND (food OR"food industry" OR"food sector"). An Indonesian string was run in Google Scholar so that implementation studies would remain in view:"rantai pasok halal" OR"manajemen rantai pasok halal" OR"halal value chain" OR"logistik halal", with pangan or makanan added where a food limiter was required. The consolidated export from this search contains 200 records. Where a publication year is stated, the dates run from 2018 to 2026, and the set is concentrated in 2023–2026.

Inclusion and Exclusion Criteria

Screening used the title, the abstract, and, where eligibility was still unclear, the full text. Inclusion required a peer-reviewed journal article published from 2016 through 2026; a food-sector setting, or a logistics and assurance analysis applied to food; and a substantive treatment of HSCM, the HVC, halal logistics, halal integrity, or traceability. English-language articles form the international core. Indonesian-language peer-reviewed articles are retained because the country-context objective depends on evidence about Law No. 33 of 2014, BPJPH, and firm-level food chains that is published principally in Bahasa Indonesia. Eligible papers may be empirical, conceptual, or reviews, provided they make a management argument. Exclusion covered incomplete and duplicate citations; books, theses, and non-scholarly items; studies of cosmetics, textiles, tourism, pharmaceuticals, or pedagogy that do not analyze a food chain; halal papers with no supply-chain or value-chain content; languages other than English and Indonesian; and items published before 2016. Table 1 states the rules in full. In the export, 145 records are tagged as journal articles, 25 as PDF documents, 16 as books, 13 as incomplete citations, and one as HTML. Several PDF-tagged items are journal articles saved from repository copies, so the export tag is not treated as an eligibility decision. Eight records lack a publication year. Thematic coding is limited to journal articles that meet Table 1.

Table 1. Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Publication period	2016–2026	Published before 2016
Document type	Peer-reviewed journal articles	Incomplete citations, duplicates, books, theses, and non-scholarly items
Language	English or Indonesian	Languages other than English and Indonesian
Sector	Food, including logistics and assurance applied to food	Cosmetics, textiles, tourism, pharmaceuticals, and pedagogy without a food-chain analysis
Topic	HSCM, HVC, halal logistics, halal integrity, or traceability	Halal studies with no supply-chain or value-chain content
Contribution	Empirical, conceptual, or review papers with a	Commentary without an analytical claim about the chain

Source: Authors' review protocol.

Data Extraction and Synthesis

A coding sheet was completed for each eligible article. The fields were authors, year, and outlet; country and food sub-sector; design, recorded as empirical, conceptual, or review; whether the study addressed HSCM, the HVC, or both; the node or nodes examined, namely procurement, processing, warehousing, logistics, and retailing; stated drivers and barriers; mechanisms of critical control, segregation, or traceability; and any explicit link to Law No. 33 of 2014, BPJPH, LPPOM MUI, HAS 23000, or national halal industrial parks. A brief appraisal noted whether the aim, the method, and the halal claim were transparent enough to bear interpretation. The appraisal is scaled to a mixed set of case studies and conceptual papers (Snyder, 2019).

Synthesis has two layers. The bibliometric layer maps annual output, outlets, and keyword co-occurrence in VOSviewer from title terms and author keywords (van Eck & Waltman, 2010). The map describes the structure of the corpus (Donthu et al., 2021). The thematic layer follows familiarization, initial coding, theme construction, review, and definition (Braun & Clarke, 2006). A priori codes match the review objectives: the relationship between HSCM and the HVC, drivers, barriers, critical control points by node, the Indonesian assurance regime, and questions for further research. Inductive codes were added where studies raised digital traceability, capability limits, or sustainability in terms the initial frame did not already contain. A theme was kept when it recurred across studies, or when one study was needed to document a particular institutional mechanism. The narrative then sets those themes against arguments in the global supply-chain literature and against Indonesia's mandatory assurance institutions. Existing bibliometric work on sustainable halal supply chains in small and medium industries maps themes and calls for further empirical study, without integrating the value-chain literature or the certification regime (Fajrah et al., 2025). The two-layer design is the means of supplying that integration.

RESULTS AND DISCUSSION

Keyword co-occurrence in this corpus separates the field into two clusters. Halal (102 occurrences), halal supply chain (45), halal supply chain management (49), and supply chain (28) sit together. Halal value chain stands apart, with 18 occurrences. The mean publication year of these terms lies between 2023.9 and 2024.5, and dated records in the export are concentrated in 2023–2026. The map reproduces the split stated in the introduction. Operational supply-chain research and value-chain research have grown side by side. The synthesis below reads them as one system for the food sector. Section 3.1 sets out the control structure. Section 3.2 sets out the drivers and

barriers. Section 3.3 places both in Indonesia's assurance regime and states the research that remains open.

3.1 Core Pillars of Halal Supply Chain Management in Food

Food studies in the corpus organize halal supply chain management (HSCM) around five nodes: procurement, manufacturing and processing, logistics and transportation, warehousing, and retailing. The nodes are sequential, and integrity belongs to the sequence. A certificate on the finished good does not repair an earlier failure, and a controlled plant does not protect a product that is later stored or sold without segregation (Azhari, 2026; Haryono & Handayani, 2018; Nurhayati & Hasanuddin, 2026). Case research on small processors and traditional markets returns to that full span, from halal raw materials through production, storage, and logistics (Gusriyanti, 2026; Ihsan et al., 2026).

Procurement is the first control point, because non-halal or doubtful inputs cannot be corrected downstream. Studies of small food producers report raw materials of unclear halal status and supplier routines that cover only part of the required control (Budiman & Putri, 2025; Gusriyanti, 2026). Upstream integrity also reaches the farm. Good agricultural practice is treated as a condition of halal crop and animal inputs, rather than as a quality program standing outside the chain (Awanis et al., 2026). For micro-scale raw materials, halal zones are proposed so that segregation begins before the factory gate (Azhari, 2026). A bakery application that ties raw-material inventory to halal traceability reports gains in reputation and customer trust, which places procurement inside the commercial case for HSCM as well as inside compliance (Hermawan & Ginantaka, 2024).

Manufacturing and processing concentrate the classic critical points: slaughter method, line dedication, shared utensils, and the handling of nonconforming product. In poultry chains, formal certification alone does not secure integrity, and written procedures are identified as a point of reinforcement (Azhari, 2026). Design work on Joper chicken shows how those procedures can be specified by joining HAS 23000, SNI 99002:2016, and the Supply Chain Operations Reference (SCOR) model (Utomo & Ramadhani, 2025). SCOR-based traceability in the wider food industry, and frameworks that join halal assurance to risk-based quality management, push in the same direction: process control has to be auditable (Dilla & Fathurohman, 2021; Hidayati et al., 2025). Traditional-market beef chains show the same points in weaker form, where slaughter, cutting, and sale are organizationally split (Rahmadana & Basya, 2025). Firm-level studies of food processors likewise treat critical halal activities as running from upstream supply to downstream delivery (Ihsan et al., 2026).

Logistics and transportation move the product across organizations, which is where custody is most often lost. Halal logistics is defined here as management of the flow through to the end of the chain under halal rules (Fuad & Atmawati, 2025).

Indonesian evidence indicates that the practice is still unevenly understood and applied, and that weak standards in transport leave a route into non-halal handling (Febriyanni, 2022; Prasetyo & Jasmine, 2022) . The literature’s response is procedural: segregation in vehicles and handling tools, documented handoff, and explicit success factors for halal logistics (Nursyifa et al., 2026) .

Warehousing is less often isolated as a research object, and it is a distinct control point. Shared storage collapses segregation achieved in production. Halal inventory control is discussed as a means of limiting gharar, understood as unclear identity and uncertain status of stock (Alif et al., 2026) . At poultry slaughterhouses, storage technology and certification performance are evaluated together, which ties the warehouse to the assurance system (Adenan et al., 2025) . Accounts of small meat processors include storage among the halal dimensions that operators must actually run (Gusriyanti, 2026) .

Retailing and food service reopen the chain at the point of consumption. Restaurants and retail outlets have to govern preparation, display, and sale as halal activities (Amelia et al., 2023; Burhan, 2025) . Downstream meat chains still lack a settled set of risk-assessment criteria (Rishelin et al., 2023) . An upstream certificate is an input to retail control, and retail practice has to stand on its own procedures (Rahmadana & Basya, 2025) .

Table 2 consolidates the five nodes. Two patterns cut across the rows. Mitigation is documentary and physical at once: certificates, procedures, and batch identity, together with segregation of tools, vehicles, and space. The density of evidence is uneven. Procurement and processing dominate the case literature. Logistics is present and often normative. Warehousing and retailing are frequently folded into neighboring nodes. The imbalance matters for Indonesia, where mandatory certification will be judged on the whole chain.

Table 2. Critical Control Points and Integrity Assurance across HSCM Nodes

HSCM node	Critical control points	Risk mitigation and integrity assurance	Primary references
Halal procurement	Halal status of raw materials; supplier documents; farm inputs and feed; doubtful materials at goods-in	Approved suppliers; material certificates; halal zones for micro-scale inputs; good agricultural practice; batch identity at receipt	(Awanis et al., 2026; Azhari et al., 2025; Budiman & Putri, 2025; Gusriyanti, 2026; Hermawan et al., 2024)
Halal manufacturing and processing	Slaughter method; dedicated lines; shared equipment and utensils; handling of	HAS 23000 and relevant SNI joined to SCOR; written procedures; tool	(Azhari, 2026; Dilla & Fathurohman, 2021; Hidayati et al., 2025; Ihsan et al.,

HSCM node	Critical control points	Risk mitigation and integrity assurance	Primary references
	nonconforming product	segregation; halal assurance linked to quality management	2026; Utomo & Ramadhani, 2025)
Halal logistics and transportation	Mixed loads; shared vehicles and handling tools; breaks in custody between nodes	Segregated transport; halal logistics procedures; documented handoff; prioritized success factors for halal logistics	(Febriyanni, 2022; Fuad & Atmawati, 2025; Nursyifa et al., 2026; Prasetyo & Jasmine, 2022)
Halal warehousing	Shared storage; loss of batch identity; storage conditions at slaughter facilities; unclear stock records	Segregated or dedicated storage; halal inventory control; traceable batches; storage systems aligned with certification	(Adenan et al., 2025; Alif et al., 2026; Gusriyanti, 2026)
Halal retailing	Preparation, display, and sale; downstream meat handling; reliance on an upstream certificate alone	Outlet procedures; segregation at the point of sale; downstream risk criteria; staff competence	(Amelia et al., 2023; Burhan, 2025; Rahmadana & Basya, 2025; Rishelin et al., 2023)

Source: Authors' synthesis of the reviewed corpus.

3.2 Drivers and Barriers to HSCM Implementation

Four drivers recur in the food-sector studies. They reinforce one another, and each one fails if the nodes in Table 2 are left unmanaged. The regulatory driver is now the hardest. Law No. 33 of 2014, and its phased application to food and beverage, makes halal control a condition of lawful circulation (Maulana & Jafar, 2025; Undang-Undang Republik Indonesia Nomor 33 Tahun 2014 Tentang Jaminan Produk Halal, 2014) . Readiness studies treat the movement from substance compliance to a supply-chain ecosystem as unfinished for food enterprises (Nurhayati & Hasanuddin, 2026; Rusdiana, 2026) . The mandate accounts for the timing of the recent literature. It does not, by itself, account for the quality of implementation.

Consumer trust is the market face of the same control system. Halal supply-chain practice is associated with confidence in specific foods, and traceability inside production is reported to support reputation as well as trust (Hermawan & Ginantaka, 2024; Santoso & Muna, 2025) . Research on blockchain-enabled traceability, certification, and supplier compliance treats all three as inputs to trust in the chain,

and finds that blockchain use among the firms studied is still at an early stage (Putra et al., 2026) . Trust therefore functions as a driver and as a test. It rewards firms that can show the chain.

Market access, differentiation, and reputation extend trust into competitive position. Halal certification is linked to selling value and product differentiation under the mandatory regime (Utami et al., 2025) . The value-chain literature treats assurance as a competitiveness asset for local products in global markets (Analia, 2026; Maulana & Jafar, 2025) . Firm-level studies connect HSCM routines with performance, which gives the commercial driver an operational content (Jannah & Wijayanti, 2025; Khazaini & Munir, 2024) . The hub ambition is the furthest statement of this driver: supply-chain implementation is presented as a route to an integrated halal zone (Hasan, 2021) . Direct evidence in the corpus connects certification and HSCM practice to differentiation and local performance more firmly than to realized export penetration (Maulana & Jafar, 2025; Utami et al., 2025) .

Ethical responsibility is the normative driver. One strand grounds HSCM in amanah and itqan, and in maqashid-oriented accounts of a sustainable halal chain (Asy'ari et al., 2026; Hidayah & Khoiry, 2026) . Partial compliance, in which the logo is obtained and the nodes are left unmanaged, is treated as an ethical failure as well as a control failure (Azhari, 2026) . The barriers are concentrated where most of the empirical studies are set, in micro, small, and medium food enterprises.

Investment and operating burden come first. Mapping of halal supply chains in small and medium enterprises identifies a structured set of barriers in which investment requirements are prominent, and related work treats technical assistance and cost relief as conditions of implementation (Ardiantono & Ardyansyah, 2024; Marifat et al., 2025) . Efficiency-oriented studies treat a cost-conscious redesign of the halal chain as a managerial task in its own right (Astiwara, 2023) .

Logistics standards are the second barrier. The difficulty visible in the corpus is the distance between available guidance and daily distribution. Halal logistics is unevenly understood and applied in Indonesia, and weak application leaves a path by which halal goods cross into non-halal handling (Febriyanni, 2022; Prasetyo & Jasmine, 2022) . Firms that seek recognition beyond the domestic market have to read national assurance and logistics practice together (Fuad & Atmawati, 2025; Maulana & Jafar, 2025) . Preparedness of small and medium firms is the third. Certification and chain control remain joint adoption problems. Integration strategies for small and medium industry, readiness studies, and work on using HSCM to carry certification into operations all describe firms that sit inside the legal timetable and outside a stable operating system (Azwar & Sapa, 2025; Kristiana et al., 2020; Nurhayati & Hasanuddin, 2026; Rusdiana, 2026) .

Raw-material traceability is the fourth. Unclear halal status at goods-in is its empirical form (Budiman & Putri, 2025) . Traceability models, from SCOR to

interpretive structuring of traceability systems, exist because identity is lost along the chain and cannot be rebuilt from the finished good (Dilla & Fathurohman, 2021; Haryono & Handayani, 2018) . Studies of the Indonesian food industry continue to treat traceability implementation as an open operational task (Yelly et al., 2026) .

Digital tools are the fifth barrier, and they are aimed at the fourth. Blockchain, digital traceability, and Internet-of-Things models appear in the corpus as designs and early applications. Blockchain use in one urban food-chain study is still initial (Putra et al., 2026) . Digital traceability is discussed as a route to efficiency for micro, small, and medium firms (Hasanah & Nurkhasanah, 2026) . An Internet-of-Things architecture has been specified for the chain of local herbal products (Pratiwi, 2026) . Awareness and blockchain are also linked to a stronger halal value chain (Effendi & Mukhlis, 2023) . Adoption capacity is the constraint. The tools address traceability when firms can finance them, govern the data, and connect them to certification records. Table 3 pairs each driver and barrier with the mechanism the corpus supports.

Table 3. Drivers and Barriers of HSCM Implementation in the Food Sector

Type	Factor	Mechanism supported by the corpus	Primary references
Driver	Regulatory mandate	Phased mandatory certification makes chain control a condition of lawful circulation	(Maulana & Jafar, 2025; Nurhayati & Hasanuddin, 2026; Undang-Undang Republik Indonesia No. 33, 2014)
Driver	Consumer trust	Traceability, certification, and supplier compliance support confidence in the food	(Hermawan et al., 2024; Putra et al., 2026; Santoso & Muna, 2025)
Driver	Market access and reputation	Certification and HSCM practice are linked to differentiation, performance, and hub ambitions	(Analia, 2026; Hasan, 2021; Jannah & Wijayanti, 2025; Utami et al., 2025)
Driver	Ethical responsibility	Amanah, itqan, and maqashid frame unmanaged nodes as an ethical failure	(Asy'ari et al., 2026; Azhari, 2026; Hidayah & Khoiry, 2026)
Barrier	Investment and operating burden	SME adoption depends on investment, assistance, and cost relief	(Ardiantono et al., 2024; Astiwara, 2023; Marifat et al., 2025)
Barrier	Logistics standards	Halal logistics guidance is unevenly applied, and custody is lost in distribution	(Febriyanni, 2022; Fuad & Atmawati, 2025; Prasetyo & Jasmine, 2022)
Barrier	SME	Firms are inside the legal	(Azwar & Sapa, 2025;

	preparedness	timetable and outside a	Kristiana et al., 2020;
		stable operating system	Rusdiana, 2026)
Barrier	Raw-material	Unclear status at goods-	(Budiman & Putri, 2025; Dilla
	traceability	in and loss of identity	& Fathurohman, 2021; Yelly
		along the chain	et al., 2026)
Barrier	Digital	Blockchain and IoT	(Hasanah et al., 2026; Pratiwi,
	adoption	remain early-stage or	2026; Putra et al., 2026)
		design-stage responses	
		to traceability gaps	

Source: Authors' synthesis of the reviewed corpus.

3.3 Implications for Indonesia's Halal Industry Ecosystem

The five nodes and the driver–barrier pattern have different consequences for regulators, for firms of different scale, and for the next round of research. Policy and regulatory implications. The Halal Product Assurance Organizing Agency (BPJPH) organizes assurance, and the food-and-beverage phase makes the five nodes a public-control problem (Nurhayati & Hasanuddin, 2026; Undang-Undang Republik Indonesia Nomor 33 Tahun 2014 Tentang Jaminan Produk Halal, 2014). Three tasks follow. The first is harmonization inside the country. HAS 23000, product standards such as SNI 99002:2016, and logistics practice need to identify the same critical points. Design studies have begun to do this for poultry, and distribution studies show that logistics practice is still incomplete (Prasetyo & Jasmine, 2022; Utomo & Ramadhani, 2025). The second is facilitation. A mandate without assistance leaves micro and small firms in the preparedness gap already described. The complements visible in the literature are technical assistance, cost relief, and coordination among stakeholders, including inspection bodies such as LPPOM MUI (Kristiana et al., 2020; Marifat et al., 2025; Rohaeni & Sutawijaya, 2020) . The third is the hub strategy. An integrated halal zone, traceability infrastructure, and national halal industrial parks work as integrity instruments when they institutionalize segregation and custody (Afifah & Miftah, 2026; Asri & Ilyas, 2022; Hasan, 2021). Readiness research is plain that regulatory progress, including Law No. 33 of 2014, has yet to produce a value-chain ecosystem able to carry local food into global markets (Aziz, 2025; Maulana & Jafar, 2025) . A policy that stops at the volume of certificates will reproduce the product-level model that the field is leaving behind.

Practical implications for industry. The studies examined here are weighted toward micro and small food firms, restaurants, and traditional markets. System models are the main resource the corpus offers to more formal operations. For those operations, the managerial object is governance of suppliers, segregated logistics, and an auditable process that joins HAS 23000 with SCOR-type control (Dilla & Fathurohman, 2021; Ihsan et al., 2026; Utomo & Ramadhani, 2025) . For micro and small firms, the feasible system is narrower and still obligatory: known halal materials, segregation of tools and storage, and records that an inspection body can follow

(Budiman & Putri, 2025; Gusriyanti, 2026; Rusdiana, 2026). Selected HSCM practices, rather than the certificate in isolation, are what performance studies associate with sustainable outcomes in micro, small, and medium food enterprises (Jannah & Wijayanti, 2025). The value-chain lens adds the commercial reading. Control of the nodes still needs a place in a coordinated ecosystem if local compliance is to become market access (Analia, 2026; Aziz, 2025; Charina & Charisma, 2023).

Academic and future research agenda. Six avenues follow from the synthesis. First, HSCM and the halal value chain should be examined in the same design. Bibliometric work on sustainable halal supply chains in small and medium industries, and studies that locate value-chain weakness beyond the technical layer, both stop short of that integration (Fajrah et al., 2025; Zahra & Tsalas, 2026). Second, logistics and warehousing need node-specific empirical designs. Both are theorized as control points, and both are measured less often than procurement and processing. Third, downstream risk criteria developed for meat should be tested in other food categories and at retail (Rishelin et al., 2023). Fourth, digital traceability should be studied as a question of adoption and performance. Current evidence is early-stage for blockchain and largely at the design stage for Internet-of-Things applications (Pratiwi, 2026; Putra et al., 2026). Fifth, the phased application of Law No. 33 of 2014 calls for observation of firms across the enforcement timetable, beyond cross-sectional snapshots of readiness (Azwar & Sapa, 2025; Nurhayati & Hasanuddin, 2026). Sixth, export-oriented work should test whether HAS 23000, national product standards, and buyer logistics requirements identify the same critical points (Maulana & Jafar, 2025; Utomo & Ramadhani, 2025).

The claim that can be defended now is limited, and it is the claim the review set out to establish. In the food sector, halal integrity is a five-node control problem joined to a value-chain competitiveness problem. Indonesia's mandatory regime has made that join a matter of compliance. The literature has assembled the pieces. It has yet to test them as one framework.

CONCLUSION AND RECOMMENDATIONS

This review shows that halal supply chain management and the halal value chain jointly shape food integrity through coordinated controls across procurement, processing, logistics, warehousing, and retailing. The strongest evidence concerns procurement and processing, while logistics, warehousing, and downstream controls remain less empirically examined. Implementation is driven by regulatory requirements, consumer trust, reputation, and Islamic ethical principles, but constrained by investment needs, weak traceability, uneven halal logistics, and limited digital adoption. In Indonesia, Law No. 33 of 2014 and BPJPH have strengthened halal assurance across the food supply chain, although implementation remains uneven, particularly among micro and small enterprises. Future research should integrate

HSCM and the halal value chain, empirically measure logistics and warehousing, strengthen traceability and digital systems, and examine implementation across different firm sizes and regulatory stages.

REFERENCES

- Adenan, M., Prianto, F. W., & Subagio, A. (2025). Evaluasi Sistem Teknologi dan Penyimpanan dalam Rantai Pasok Halal Rumah Potong Unggas. *Postmodernism*. <https://lptnunganjuk.com/ojs/index.php/postmodernism/article/view/223>
- Afifah, H., & Miftah, A. (2026). Integrasi Industri Pangan Halal dan Keuangan Syariah di Indonesia: Akselerasi Ekosistem melalui Kebijakan Strategis. *Journal of Management and Halal*. <https://journal.tafaquhinstitut.com/ijmhi/article/view/10>
- Alif, M., Hafidz, S. M., & Putri, V. A. (2026). Strategi manajemen persediaan halal dalam mitigasi risiko gharar: Tinjauan kepatuhan rantai pasok berbasis Syariah. *Media Riset Bisnis Manajemen*. <https://www.jurnalbest.com/index.php/mrbima/article/view/735>
- Amelia, M., Yafiz, M., & Harahap, M. I. (2023). Analisis Implementasi Halal Supply Chain Management pada Bisnis Restoran. : : *Keislaman, Sosial Dan*. <https://jurnal.radenfatah.ac.id/index.php/intelektualita/article/view/19403>
- Analia, F. (2026). Halal Value Chain Sebagai Strategi Penguatan Daya Saing Industri Halal. *EKSUDA: Jurnal Studi Ekonomi Syariah*. <https://staidarussalamlampung.ac.id/ejournal/index.php/eksyda/article/view/1241>
- Ardiantono, D. S., & Ardyansyah, G. D. (2024). Mapping the barrier and strategic solutions of halal supply chain implementation in small and medium enterprises. *Journal of Islamic*. <https://www.emerald.com/jima/article/15/7/1673/1218689>
- Arum, P. S. (2023). Analisis Implementasi Halal Supply Chain Management pada Usaha Mikro Kecil Menengah (UMKM) Tahu Tempe Putri (Sudy Kasus di UMKM Tahu Tempe Putri di. <https://repositori.uma.ac.id/jspui/handle/123456789/19899>
- Asri, K. H., & Ilyas, A. (2022). Penguatan ekosistem halal value chain sebagai pengembangan industri halal menuju era 5.0. *ALIF: Sharia Economics Journal*. <https://scholar.archive.org/work/cevnyag5zfe6vcsqif4erdu5we/access/wayback/https://journal.neoelectura.com/index.php/alif/article/download/712/531>
- Astiwar, E. M. (2023). Strategi Efisiensi Dalam Pengelolaan Rantai Pasok Halal. *Journal of Scientech Research and Development*. <https://idm.or.id/JSCR/index.php/JSCR/article/view/974>
- Asy'ari, A. H., Sirajuddin, S., & Anwar, N. (2026). Integrasi Halal Supply Chain Management dan Maqashid Syariah Untuk Rantai Pasok Halal Berkelanjutan di Indonesia. *Jurnal Tana Mana*. <http://ojs.staialfurqan.ac.id/jtm/article/view/1724>
- Awanis, S., Rabbani, S. S., & Deli, S. Z. A. (2026). Implementasi Good Agriculture Practice (GAP) dalam Mendukung Produk Halal: A Review. *Hakikat: Journal of Halal*. <https://jos.unsoed.ac.id/index.php/jhs/article/view/20272>
- Azhari, M. (2026). Mitigasi Risiko Rantai Pasok Halal berbasis Maqashid Syariah. *JES (Jurnal Ekonomi Syariah)*. <https://jes.unisla.ac.id/index.php/jes/article/view/1249>
- Aziz, F. H. (2025). Peran halal value chain dalam penguatan ekosistem industri halal di Indonesia: Pendekatan strategis. *At-Tijariy: Jurnal Mu'amalah Dan Ekonomi Islam*. <https://jurnalnamis.id/index.php/attijariy/article/view/53>

- Azwar, A., & Sapa, N. (2025). Manajemen Rantai Pasok Halal di Indonesia: Analisis SWOT dan Implikasi Strategis: Halal Supply Chain Management in Indonesia: SWOT Analysis and Strategic. *AL-KHIYAR: Jurnal Bidang Muamalah*. <https://journal.stiba.ac.id/index.php/khiyar/article/view/210-238>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*. <https://doi.org/10.1191/1478088706qp0630a>
- Budiman, R., & Putri, F. C. (2025). Mitigasi Risiko Kontaminasi Dalam Aktivitas Halal Supply Chain Management Pada Umkm Mekar Sari Produk Rengginang Dengan Metode Supply Chain. *Jurnal Inovasi Teknik Industri*. <https://pdfs.semanticscholar.org/4581/d4ae322b19c374b6a74fefb7d1da7fe9a877.pdf>
- Burhan, A. (2025). Analisis Penerapan Halal Supply Chain Pada Produk Makanan Di Waserda Pondok Pesantren Salafiyah Syafi'iyah Sukorejo. *Al-Adillah: Jurnal Hukum Islam*. <http://ejournal.unibo.ac.id/index.php/aladillah/article/view/1280>
- Charina, A., & Charisma, D. (2023). Penerapan Ekosistem Halal Value Chain (Hvc) Pada Industri Makanan Dan Minuman Halal Di Indonesia The Effectiveness Of The Implementation Of The Halal. *Jurnal Pemikiran Masyarakat Ilmiah*. <https://www.academia.edu/download/105165947/pdf.pdf>
- Dilla, Z. U., & Fathurohman, M. S. (2021). Implementasi halal traceability supply chain dengan model supply chain operation reference (SCOR) industri makanan halal. *Jurnal Ekonomi Syariah Teori Dan*. <https://www.academia.edu/download/104843125/pdf.pdf>
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2021.04.070>
- Effendi, K. A., & Mukhlis, T. I. (2023). Analisis transformasi halal awerness dan teknologi blockchain terhadap penguatan halal value chain di Indonesia. *Jurnal Ilmiah*. <https://www.jurnal.stie-aas.ac.id/index.php/jei/article/view/10383>
- Fajrah, N., Putri, N. T., & Fatrias, D. (2025). Analisis Bibliometrik Sustainable Halal Supply Chain Pada Industri Kecil Menengah. *Jurnal Rekayasa Sistem Industri*. <https://scholar.archive.org/work/wyac4pklvnevjgb2gqhwx4cta/access/wayback/>
https://forum.upbatam.ac.id/index.php/rsi/article/download/v10n2_nofriani/v10n2_nofriani/40210
- Febriyanni, R. (2022). Perkembangan Logistik Halal: The Development of Halal Logistics. *Balanca: Jurnal Ekonomi Dan Bisnis Islam*. <http://ejurnal.iainpare.ac.id/index.php/balanca/article/view/5185>
- Findayani, B., & Masruroh, N. (2026). Implementasi Halal Supply Chain Management Pada Industri Pangan: Kajian Literatur Dan Implikasi Pengembangan Industri Halal Di Indonesia. *Jurnal Ekonomi Bisnis*. <https://www.ejournal.lapad.id/jebmak/article/view/1746>
- Fuad, M. Z., & Atmawati, E. (2025). Peluang dan penerapan logistik halal di Indonesia dalam rantai pasok makanan. *TAKAFUL: Jurnal Ekonomi*. <https://journal.iai-daraswaja-rohil.ac.id/index.php/takaful/article/view/85>
- Gusriyanti, C. (2026). Implementasi halal supply chain pada pengusaha penggilingan daging di pasar tradisional (studi pada pengusaha penggilingan daging di

- Musytari: *Jurnal Manajemen, Akuntansi, Dan.*
<https://journal.cib.institute/index.php/musytari/article/view/3991>
- Haryono, H., & Handayani, D. I. (2018). Modeling (ISM) Approach: Pemodelan Sistem Traceability Halal Supply Chain dalam menjaga Integritas Produk Makanan Halal Dengan Pendekatan Interpretive. (*Productivity, Optimization And.*
<https://prozima.umsida.ac.id/index.php/prozima/article/view/1557>
- Hasan, Z. (2021). Making Indonesia as integrated halal zone and world halal sector hub through the implementation of halal supply chain. *Journal of Islamic Economic and Business Research*. <https://jiebr.umsida.ac.id/index.php/jiebr/article/view/2>
- Hasanah, A. P. R., & Nurkhasanah, A. O. U. (2026). Analisis Efisiensi Rantai Pasok Halal melalui Implementasi Digital Traceability berbasis Prinsip Ekonomi Syariah pada UMKM. *JIMU: Jurnal Ilmiah*.
<https://ojs.smkmerahputih.com/index.php/jimu/article/view/2690>
- Hermawan, D., & Ginantaka, A. (2024). persediaan bahan baku terintegrasi e-commerce untuk mendukung ketertelusuran halal (halal traceability) pada UMKM bakery. *Jurnal Ilmiah Pangan Halal*.
<https://openurl.ebsco.com/contentitem/gcd:183397072?sid=ebsco:plink:crawler-gcd&id=ebsco:gcd:183397072&crl=c&jrnl=27154874>
- Hidayah, S., & Khoiry, M. F. (2026). Nilai-Nilai Amanah dan Itqan dalam Hadis sebagai Fondasi Halal Supply Chain Management. *Journal Tafkirul Iqtishodiyah*.
<http://www.ejournal.stisdulamtim.ac.id/index.php/JTI/article/view/217>
- Hidayati, L., Cheumar, M., Sucipto, S., & Juliana, J. (2025). *Halal Assurance and Quality Management: A Strategic Framework for Sustainable Growth in the Food Industry Integrasi Jaminan Halal dan Manajemen Mutu*. <https://smartfoodsafes.com/wp-content/uploads/2025/11/Integrating-Halal-Assurance-and-Quality-Management.pdf>
- Ihsan, M. F. U., Putra, R. A. D. S., & Mustafidah, W. (2026). Implementation Of Halal Supply Chain Management In PT. Oreng Osing Banyuwangi. *Proceedings. Icesy*.
<http://proceedings.icesy.org/index.php/PI/article/view/80>
- Jannah, S. M., & Wijayanti, D. M. (2025). Improving Sustainable Performance for MSMEs Through Halal Supply Chain Management. *Jihbiz: Jurnal Ekonomi*.
<https://ejournal.uniramalang.ac.id/jihbiz/article/view/6287>
- Khazaini, W., & Munir, M. (2024). Peningkatan kinerja perusahaan melalui implementasi strategi manajemen halal supply chain. *Jurnal Ilmu Sosial*.
<https://ejournal.penerbitjurnal.com/index.php/socialscience/article/view/765>
- Kristiana, B. V, Indrasari, A., & Giyanti, I. (2020). Halal supply chain management dalam optimalisasi penerapan sertifikasi halal UMKM. *Performa: Media Ilmiah Teknik*.
<https://jurnal.uns.ac.id/performa/article/view/46379>
- Maknunah, N. L., Rahma, R., & Amal, S. (2020). Implementasi Halal Supply Chain Management Pada Bisnis Pangan. *Iqtisodina*.
<https://ejournal.kopertais4.or.id/madura/index.php/IQTISODINA/article/view/6322>
- Marifat, N., Kamiruddin, K., & Hasbi, H. (2025). Analisis Implementasi Halal Value Chain Pada Produk Home Industri Perspektif Ekonomi Syariah (Pada UMKM di Kabupaten Bone). *IKRAITH-EKONOMIKA*. <https://journals.upi-yai.ac.id/index.php/IKRAITH-EKONOMIKA/article/view/5052>

- Maulana, N., & Jafar, W. (2025). Analisis kesiapan ekosistem halal value chain Indonesia dalam mendukung daya saing produk halal lokal di pasar global. *Mathla'ul Anwar of Halal Issues*. <https://journal.halalunmabanten.id/index.php/ijma/article/view/144>
- Nurhayati, A., & Hasanuddin, M. (2026). Kesiapan implementasi halal supply chain pada pelaku usaha makanan. *Al-Idarah: Jurnal Manajemen*. <https://journal.ibrahimy.ac.id/index.php/idarrah/article/view/10085>
- Nursyifa, N., Salam, H., & Okitasari, H. (2026). Identifikasi dan Penentuan Prioritas Critical Success Factors pada Halal Logistics Menggunakan Systematic Literature Review dan Fuzzy Analytical Hierarchy. *Jurnal Ragam Pengabdian*. <https://teewanjournal.com/index.php/juragan/article/view/3907>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E., Brennan, S., Chou, R., Glanville, J., Grimshaw, J. M., Hrobjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., & McGuinness, L. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*. <https://doi.org/10.1136/bmj.n71>
- Prasetyo, I., & Jasmine, T. L. (2022). Penerapan Standar Logistik Halal Di Indonesia Sebagai Persyaratan Logistik Global. *Ilmiah Manajemen EMOR*. <https://www.academia.edu/download/110579936/pdf.pdf>
- Pratiwi, H. (2026). Digitalisasi Rantai Pasok Halal: Model Transparansi dan Lacak Balak Produk Herba Lokal Berbasis IoT. *Journal of Islamic Economics and Finance*. <https://jurnal.stikes-ibnusina.ac.id/index.php/JUREKSI/article/view/3836>
- Putra, M. F. V., Awaliyah, R., & Anwar, D. R. (2026). Supply chain halal: Pengaruh traceability (blockchain), sertifikasi, dan kepatuhan pemasok terhadap kepercayaan rantai pasok. : : *Jurnal Manajemen Dan*. <https://jurnal.stie-pb.ac.id/index.php/jumesi/article/view/19>
- Rahmadana, R. F., & Basya, M. M. (2025). Titik kritis penerapan halal supply chain pada komoditas daging sapi di pasar tradisional wonokromo Surabaya. *Investama: Jurnal Ekonomi*. <https://ejournal.iaingawi.ac.id/index.php/investama/article/view/1881>
- Rishelin, N., Ardi, R., & Suryadi, I. (2023). Pengembangan model kriteria penilaian manajemen risiko halal supply chain daging pada bagian downstream di Indonesia. *Dan Aplikasi Sistem & Teknik Industri*. https://www.researchgate.net/profile/Nadya-Rishelin/publication/373193079_Pengembangan_Model_Kriteria_Penilaian_Manajemen_Risiko_Halal_Supply_Chain_Daging_pada_Bagian_Downstream_di_Indonesia/links/64deec6bc5ff5cd0c399e4/Pengembangan-Model-Kriteria-Penilaian-Manajemen-Risiko-Halal-Supply-Chain-Daging-pada-Bagian-Downstream-di-Indonesia.pdf
- Rohaeni, Y., & Sutawijaya, A. H. (2020). Pengembangan model konseptual manajemen rantai pasok halal studi kasus Indonesia. *J@ Ti Undip: Jurnal Teknik Industri*. <https://ejournal.undip.ac.id/index.php/jgti/article/view/27457>
- Rusdiana, R. (2026). Strategi integrasi halal supply chain management bagi industri kecil menengah (IKM) di Indonesia (studi meta-sintesis literatur dan. *JURNAL EKONOMI DAN BISNIS (EKOBIS)*. <https://jurnal.iaidarussalam.ac.id/index.php/febi/article/view/702>

- Santoso, L. A., & Muna, N. El. (2025). Analisis penerapan halal supply chain dalam meningkatkan kepercayaan konsumen pada produk Lumpia Merdeka Jombang. *QOSIM: Jurnal*. <http://ejournal.yayasanpendidikandzurriyatulquran.id/index.php/qosim/article/view/1930>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*. <https://doi.org/10.1111/1467-8551.00375>
- Undang-Undang Republik Indonesia Nomor 33 Tahun 2014 Tentang Jaminan Produk Halal (2014). <https://peraturan.bpk.go.id/Details/38709/uu-no-33-tahun-2014>
- Utami, S., Akib, A., & Utami, D. (2025). Transformasi keunggulan kompetitif industri pangan halal: Tinjauan sistematis pengaruh sertifikasi halal terhadap nilai jual dan diferensiasi produk. *Journal of Halal*. <http://journal.nurscienceinstitute.id/index.php/jhis/article/view/2338>
- Utomo, M. F. B., & Ramadhani, S. D. R. (2025). Rancang bangun model rantai pasok halal Ayam Joper: Integrasi HAS 23000, SNI 99002: 2016, dan Model SCOR. *Journal of Halal*. <http://journal.nurscienceinstitute.id/index.php/jhis/article/view/1771>
- van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*. <https://doi.org/10.1007/s11192-009-0146-3>
- Yelly, M. S. N. N., Farhan, M., & Tarigan, N. B. (2026). Traceability rantai pasok halal pada industri makanan di Indonesia. *EKONAM: Jurnal*. <https://www.ejournal.uicm.ac.id/index.php/ekonam/article/view/763>
- Zahra, N. S., & Tsalas, S. K. (2026). Analisis Metodologi Halal Value Chain dalam Penguatan Ekosistem Industrial Halal. *Of Management And*. <https://journal.tafaquhinstitut.com/ijmhi/article/view/5>