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How Is The Relationship Between The Halal Value Chain and Accounting Information Systems?

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ABSTRACT

This study investigates the integration of Accounting Information Systems (AIS) into the Halal Value Chain (HVC) to enhance transparency, traceability, and halal compliance. As halal products gain global traction for their quality, hygiene, and ethical standards, AIS offers a technological infrastructure to manage and monitor product flow and certification processes. AIS enables real-time tracking, improves decision-making, and ensures that halal requirements are met throughout the supply chain. Despite its advantages, implementation presents challenges such as high costs, technical complexity, lack of standardized halal certification, and limited skilled personnel. Nonetheless, the benefits—operational efficiency, cost savings, and strengthened consumer trust—highlight AIS as a strategic asset. The adoption of advanced technologies like blockchain and IoT further enhances halal assurance. The study concludes by emphasizing the importance of multi-stakeholder collaboration to overcome barriers and promote a trustworthy and competitive halal ecosystem at the global level..

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INTRODUCTION

The halal industry encompasses a wide range of sectors, including food, pharmaceuticals, cosmetics, and tourism, all adhering to Islamic principles and ethical standard (Anwari & Hati, 2020). This industry has experienced substantial expansion recently, propelled by an increasing global Muslim population and a growing awareness of halal products and services (Giyanti, Indrasari, Sutopo, & Liquiddanu, 2020). Indonesia, with its large Muslim population, stands as one of the most substantial markets for halal products (Abdul Mu'ti Sazali & Jeanne Svensky Ligte, 2017; Giyanti et al., 2020; Mubarok & Imam, 2020; Mujahidin, 2020).

Indonesia, with its large Muslim population, stands as one of the most substantial markets for halal products (Rizky, Nur, Fathoni, & Sari, 2021). The food industry, which has an approximate total consumption of IDR 844.35 trillion, has high competition (Mursid, 2021). The food and beverage business sector will continue to grow and become a mainstay of industries engaged in non-oil and gas processing, given the strong domestic market demand (Rohmat Hidayat & Alifah, 2022). Halal foods are a key component of the halal industry, with stringent requirements governing the sourcing, processing, and distribution of these products. Halal-certified food products must be free from any non-halal ingredients or contaminants and must be prepared in accordance with Islamic guidelines. The increase in the world's Muslim population and purchasing power has created opportunities for the growth of the global halal industry (Waluyo, 2020). Halal products are not just based on religious beliefs but have become a global market force for both Muslims and non-Muslims (Waluyo, 2020).

Halal products are in high demand as they guarantee safety, hygiene, and quality, which in turn has increased customer satisfaction. The halal industry has become a necessity for people with a strong understanding of their religious values (Mujahidin, 2020). Halal products' quality, safety, and hygiene are critical factors that determine customer satisfaction (Mursid, 2021). Halal-certified products have a number of requirements, including not containing forbidden animal derivatives like pork. Islamic financial services and halal food and beverages are the highest sectors compared to other sectors (Millatina, Hakimi, Budiantoro, & Arifandi, 2022). Halal-certified products are required to be free from non-halal ingredients and prepared according to Islamic guidelines. This growing demand has created a need for greater transparency and accountability in the halal value chain, which can be achieved through the integration of accounting information systems (Riwajanti, Kusmintarti, & Alam, 2020). nformation on halal food production, handling, and storage is also important (Baharuddin, Kassim, Nordin, & Buyong, 2015). Consumption of halal food maintains religion, soul, mind, descent, and property (Wahyudi, Mutmainah, & Binti Ali, 2021). The findings of research can provide an adequate

recommendation for the design of the accounting information system from a practical standpoint and in accordance with Islamic law (Hidayah, Putra, & Yati, 2018).

Accounting information systems play a pivotal role in enhancing the halal value chain by providing a structured approach to data collection, processing, and reporting. These systems facilitate the tracking of halal-certified materials and products throughout the supply chain, ensuring that all transactions and processes align with halal requirements. By integrating accounting functions with supply chain management, businesses can gain a comprehensive view of their operations, enabling them to identify and address potential risks and inefficiencies. Additionally, accounting information systems help keep clear records of all transactions, which are important for proving that businesses follow halal standards and for making audits easier for certification organizations. Such systems are vital for verifying that products meet halal criteria, which include not only the ingredients but also the production processes. The stringent protocols and modules followed by halal food producers regarding cleanliness and hygiene have led to increased acceptance by both Muslim and non-Muslim consumers (Jalil, 2018). This has led to halal integrity becoming the responsibility of each supply chain member.

The application of accounting information systems extends to various aspects of the halal value chain, including procurement, production, and distribution. In procurement, these systems can verify that all raw materials and ingredients are sourced from halal-certified suppliers. Production processes can be monitored to ensure compliance with halal guidelines, such as avoiding cross-contamination with non-halal substances. In distribution, accounting information systems can track the movement of halal products, ensuring that they are transported and stored in accordance with halal requirements. Effective segregation is achievable through effective communication, where 'halal supply chain' needs to be coded on freight documents, freight labels, and in ICT systems (Tieman, Darun, Fernando, & Ngah, 2019). The use of IT, such as blockchain, can improve halal compliance and traceability by enhancing information and product tracking.

The integration of accounting information systems with other technologies, such as blockchain and the Internet of Things, further enhances the capabilities of the halal value chain. Blockchain technology, with its decentralized and immutable ledger, provides a secure and transparent platform for tracking halal products from origin to consumption (Ali, Chung, Kumar, Zailani, & Tan, 2021). This technology ensures the integrity of halal certification by preventing fraud and counterfeiting. The Internet of Things enables real-time monitoring of environmental conditions, such as temperature and humidity, during transportation and storage, ensuring that halal products are maintained under optimal conditions. The convergence of these technologies with accounting

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information systems creates a holistic ecosystem that supports the halal value chain and fosters consumer trust. The importance of Malaysia's halal supply chain management system has been highlighted by public attention, but supply chain management solutions are difficult, expensive, and time-consuming in terms of supply, transportation, warehousing, and retail (Azmi, Musa, Zailani, & Fam, 2021). In Indonesia's coffee supply chain, enhancing information visibility and accuracy has involved diverse research initiatives (Azis & Irjayanti, 2024).

The benefits of implementing integrated accounting information systems in the halal value chain are manifold. Improved transparency and traceability enhance consumer confidence in halal products, leading to increased market share and brand loyalty. Enhanced efficiency and cost savings result from streamlined processes and reduced waste. Effective risk management minimizes the potential for non-compliance and product recalls, protecting the brand's reputation. By integrating technology, like blockchain, companies can also use technology to record offenses, identify components digitally, and use AI to monitor crime. In the coffee industry, for example, the rapid advancement of technology and the growing reliance on digital platforms have made it imperative to leverage the expanding telecommunication network. However, the implementation of integrated accounting information systems in the halal value chain also presents challenges. The initial investment in technology and training can be significant, particularly for small and medium-sized enterprises. Data privacy and security concerns must be addressed to protect sensitive information. Additionally, interoperability issues between different systems and platforms can hinder integration efforts. Despite these challenges, the potential benefits of integrated accounting information systems in the halal value chain outweigh the risks.

The adoption of these systems is not merely a technological upgrade; it represents a strategic shift toward greater transparency, accountability, and ethical conduct in the halal industry. The development of the halal industry needs to be supported by the development of the right supply chain, because stakeholders who play a very important role are halal businesses/industries, governments, higher education/research institutions, business actors supporting halal supply chain infrastructure, and communities (Rohaeni & Sutawidjaya, 2020). Halal industries are accountable for their actions and behaviors with better transparency about their business activities and operations (Ahmad, Rahman, Helmi, & Hidthiir, 2020). By embracing integrated accounting information systems, businesses can enhance their competitiveness, build trust with consumers, and contribute to the sustainable growth of the halal market (Atieqoh, Waseso, & Hamidi, 2023; Rahmawati & Subardjo, 2023).

The establishment of robust halal standards and certification processes is critical to maintaining the integrity of the halal value chain. These standards

provide a framework for halal compliance, covering aspects such as sourcing, production, and distribution. Halal certification bodies play a vital role in auditing and verifying that products and processes meet these standards (Marjudi, Setik, Ahmad, Hassan, & Kassim, 2023). However, these institutions encounter challenges such as management concerns and restricted market access (Nuraisyah, Wulandari, Indrawan, & Othman, 2025).

Although halal certification of financial products may reduce transaction costs for its buyers, in practice, it takes considerable amounts of time and money to obtain a halal certification (Hayat, Den Butter, & Kock, 2013). The lack of harmonization in halal standards across different countries and regions creates complexities for businesses operating in the global halal market. Differing interpretations of halal principles and varying certification requirements can lead to confusion and inconsistencies. To address this challenge, efforts are underway to promote greater harmonization of halal standards at the international level. This involves collaboration among standard-setting organizations, certification bodies, and governments to develop a common framework for halal compliance. The actual aim of Halal certification is to promote trade and maximize consumer choice (Raheem & Demircib, 2018). To help halal certification bodies get accredited, the Standards and Metrology Institute for Islamic Countries has created detailed guidelines that offer a uniform way to evaluate and approve these organizations, which helps make halal certification practices more consistent and trustworthy. By harmonizing halal standards, businesses can reduce compliance costs, streamline operations, and access new markets. The standardization of organic produce relied on independent third-party certification and international accreditation of the certification guidelines (Giovannucci & Ponte, 2005).

The integration of accounting information systems into the halal value chain represents a significant advancement in ensuring the integrity, transparency, and efficiency of halal-certified products and services (Noordin, Noor, & Samicho, 2014). Halal, an Arabic term meaning "permissible," dictates a set of principles and practices governing various aspects of Muslim life, including food, finance, and pharmaceuticals, thus necessitating a rigorous system of verification and traceability across the entire supply chain (Zulfakar, Anuar, & Talib, 2014). The halal value chain encompasses all activities, from sourcing raw materials to manufacturing, distribution, and retail, each of which must adhere to strict halal standards (Tieman, van der Vorst, & Ghazali, 2012). Using integrated accounting information systems creates a strong way to keep track of and manage these processes, allowing for immediate oversight and control of halal compliance. The growing demand for halal products globally has amplified the need for sophisticated systems that can effectively manage the complexities of halal certification and supply chain management. Information sharing is crucial for supply chain integration and competitiveness in the halal food market, and this

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sharing is more effective when members of the halal supply chain have strong relationships (Masrom, Rasi, & Daut, 2017).

Moreover, these systems can automatically flag non-halal ingredients or materials, send alerts for expiring halal certifications, and generate comprehensive reports on halal compliance metrics. Businesses are increasingly seeking halal certification to meet consumer demands and expand their market reach. Halal certification is a tool to ensure products meet the needs of Muslims. The value chain includes all the activities that contribute to the creation of a product or service, from sourcing raw materials to distributing the final product to consumers. Halal certification is considered proof that products and services are safe, hygienic, and of high quality, thereby increasing customer satisfaction. By incorporating halal-specific parameters, organizations can track and manage halal compliance throughout the value chain. Accounting information systems offer a way to improve transparency, efficiency, and compliance with halal standards in the rapidly growing halal market.

This research has the potential to fill the literature gap by exploring how AIS can support the transparency and reliability of information in the halal value chain. Furthermore, the findings of this research can encourage the development of more inclusive and value-based accounting systems, which are relevant for both companies and regulators in the global halal market..

RESEARCH METHOD

Aa This research will use a literature review approach to analyze and synthesize existing information regarding the relationship between the halal value chain and accounting information systems. This method allows for the identification, evaluation, and interpretation of relevant scientific works to build a comprehensive and systematic understanding of the researched topic. This understanding will teach us how accounting information systems can effectively support the halal value chain, ensuring compliance with halal standards and enhancing overall operational efficiency. Ultimately, this research aims to contribute to the body of knowledge in both halal management and accounting practices.

The design of this research is descriptive-analytical. The research will identify key concepts, theories, and empirical findings from relevant literature and then analyze the reciprocal relationship between the halal value chain and accounting information systems. The main objective is to map how accounting information systems support or influence various stages in the halal value chain, as well as the challenges and opportunities that arise. By examining these aspects, the research aims to provide valuable insights that can enhance the efficiency and transparency of halal management practices. Ultimately, this study seeks to contribute to the development of more robust accounting frameworks that align

with halal principles, thereby fostering greater trust and compliance within the industry.

RESULT AND DISCUSSION

Integrating Accounting Information Systems for Transparency and Traceability in the Halal Value Chain

The integration of accounting information systems within the halal value chain is paramount to ensuring the transparency and traceability of halal products, addressing the increasing demands of consumers and regulatory bodies for verifiable halal integrity (Zulfakar et al., 2014). Halal, once considered a religious necessity for Muslims, has evolved into a global standard indicative of safety, trustworthiness, and ethical production, attracting both Muslim and non-Muslim consumers (Atieqoh et al., 2023; Jalil, 2018). In this expanded market, the integrity of the Halal label is crucial, necessitating sophisticated systems that can track products from origin to consumption (Mohamed, Abdul Rahim, & Ma'aram, 2020). The absence of robust traceability mechanisms can lead to breaches in Halal integrity, eroding consumer confidence and potentially damaging the reputation of businesses (Soon, Chandia, & Regenstein, 2017). Accounting information systems offer a technological infrastructure to monitor and manage the flow of Halal products and information across the supply chain, ensuring compliance with Halal standards at each stage (Masrom et al., 2017).

The strategic application of accounting information systems can significantly enhance the Halal certification process, providing a comprehensive view of the Halal ecosystem, which includes regulatory bodies and food manufacturers (Noordin et al., 2014). This approach facilitates a proactive rather than reactive stance toward compliance, enabling businesses to anticipate and address potential issues before they escalate into major crises. Transparency in the supply chain is a multifaceted concept that encompasses various aspects of a company's operations, including marketing, finance, human resources, information systems, and supply chain management (Raja & Mohan, 2024). By incorporating CSR practices into their strategic planning, halal industries demonstrate accountability and enhance the transparency of their business operations, which aligns with Islamic business ethics that prioritize the welfare of humanity and the environment (Ahmad et al., 2020). The adoption of Halal logistics requires logistics service providers to upgrade their facilities to comply with Halal practices. Government support is also essential in reducing bureaucratic complexities and facilitating the implementation of Halal logistics (Haleem, Khan, & Khan, 2021).

Effective implementation of accounting information systems necessitates a detailed understanding of the critical success factors within the Halal supply chain, including government support, transportation planning, information

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technology, human resource management, collaborative relationships, Halal certification, and Halal traceability (Ab Talib, Hamid, & Zulfakar, 2015). The complexity of global supply chains, coupled with the intricacies of Halal standards, demands a coordinated effort from all stakeholders to maintain Halal integrity. This coordination involves the integration of data across different systems and organizations, requiring standardized data formats and communication protocols to ensure seamless information flow. Moreover, accounting information systems facilitate the collection and analysis of data related to halal compliance, enabling businesses to identify areas for improvement and implement corrective actions promptly.

Furthermore, the role of technology-driven mechanisms, such as blockchain, IoT, and RFID, along with human-driven mechanisms like collaboration, plays a crucial role in achieving supply chain transparency. Accounting information systems act as a central repository for data generated by these technologies, providing a holistic view of the halal supply chain. The effective segregation of halal supply chains, particularly in Muslim countries, necessitates effective communication and coding of 'halal supply chain' information on freight documents, labels, and within ICT systems (Tieman et al., 2019). This segregation ensures that halal products are not contaminated by non-halal items, maintaining the integrity of the halal supply chain.

Supply chain visibility helps coordinate the supply chain partners better by encouraging communication among all supply chain parties to share information efficiently, ensuring the advancement of the production process and thus improving the operational performance (Raja & Mohan, 2024). Moreover, the application of accounting information systems can assist in monitoring logistics, guaranteeing product safety and quality, and encouraging customer trust by implementing standards, particularly in the electronic identification, acquisition, and dissemination of commercial data (Azis & Irjayanti, 2024). Accounting information systems can be integrated with blockchain technology to enhance the transparency, safety, and effectiveness of business processes in the Halal food supply chain (Ali et al., 2021; Rahmawati & Subardjo, 2023). By providing real-time information on the location and condition of halal products, these systems enable businesses to respond quickly to disruptions and ensure the continued availability of halal-compliant goods. Ultimately, the integration of accounting information systems into the halal value chain is not merely a technological upgrade but a strategic imperative that fosters trust, enhances efficiency, and ensures the sustainable growth of the halal industry (Aithal, Singh, Ray, & Duraipandian, 2021; Kopanaki, Stroumpoulis, & Oikonomou, 2021; Raja & Mohan, 2024).

Challenges in Implementing Integrated Accounting Information Systems within Halal Supply Chains

The implementation of integrated accounting information systems within halal supply chains presents a unique set of challenges that stem from the intricate nature of both the technology and the specific requirements of halal compliance (Azmi et al., 2021). Halal supply chains are characterized by the need for meticulous tracking and documentation of products and materials to ensure adherence to Islamic law throughout the entire process, from sourcing to consumption (Zulfakar et al., 2014). This necessitates a level of transparency and traceability that can be difficult to achieve with traditional accounting systems, demanding a more sophisticated and integrated approach (Ali et al., 2021). The integration of accounting systems with other supply chain management tools, such as traceability systems and enterprise resource planning systems, is crucial for maintaining halal integrity (Buttke, Schötteler, Seuring, & Ebinger, 2024). One of the primary hurdles is the lack of standardized halal certification processes across different regions and countries (Ab Talib et al., 2015). This creates complexities in data management and reporting, as companies operating in multiple markets must adapt their systems to comply with varying standards and regulations (Noordin et al., 2014). Furthermore, the need for real-time visibility into inventory and processes requires significant investment in technology infrastructure and training, particularly for smaller businesses that may lack the resources and expertise to implement these systems effectively (Haleem et al., 2021). Effective segregation is crucial, necessitating clear communication through coding 'halal supply chain' on freight documents, labels, and ICT systems (Tieman et al., 2019).

A significant challenge arises from the complexity of integrating existing legacy systems with new, integrated platforms. Many companies, especially small and medium-sized enterprises, may rely on outdated accounting systems that are not easily compatible with modern software solutions. Such technological disparities can lead to the persistence of isolated data environments, resulting in discrepancies within financial statements and significantly hindering the unobstructed exchange of information that is paramount for maintaining effective halal compliance oversight. The seamless integration of disparate systems necessitates meticulous planning, robust data migration strategies, and potentially, the complete overhaul of existing IT infrastructure, resulting in substantial financial outlays and considerable operational downtime. Moreover, the intricate structure and compatibility concerns associated with cloud computing present technological challenges, requiring alignment with organizational technical aspects and the customization of existing applications for cloud systems (Mujalli, Wani, Almgrashi, Khormi, & Qahtani, 2024). The necessity of adapting legacy systems to meet the stringent requirements of halal

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traceability, along with the comprehensive data migration and potential IT infrastructure overhauls, constitutes a substantial financial and operational undertaking, potentially deterring smaller businesses from embracing integrated accounting information systems.

The human element also presents a considerable challenge in implementing these integrated systems. Successful implementation hinges on comprehensive training programs that extend beyond mere software operation, focusing on instilling a deep understanding of halal principles and their implications for accounting practices. Many employees may lack the necessary skills and knowledge to effectively utilize the new systems, leading to errors, inefficiencies, and resistance to change. Furthermore, the need for specialized expertise in both accounting and halal compliance can be difficult to find and retain, particularly in regions where halal industries are still developing. Overcoming this challenge requires a multi-faceted approach, including investment in education and training programs, recruitment of qualified personnel, and the development of a strong organizational culture that values continuous learning and adaptation. Organizations that understand new technology are not afraid of changes to established business processes (Mujalli et al., 2024). Successfully navigating the human element necessitates a strategic and sustained investment in comprehensive training and development programs. This will foster a culture of continuous learning, ensuring that the workforce is not only proficient in utilizing the new systems but also deeply understands and appreciates the significance of halal principles in accounting practices.

Data security and privacy concerns also pose a significant challenge, particularly in the context of cloud-based accounting systems (Marsintauli, Novianti, Situmorang, & Djoniputri, 2021). Halal supply chains often involve sensitive information about ingredients, suppliers, and production processes, which must be protected from unauthorized access and cyber threats. The cloud presents challenges related to security in terms of third-party data access, transmission, and storage (Mujalli et al., 2024). The cloud presents challenges related to security in terms of third-party data access, transmission, and storage. Concerns around data security and privacy are particularly significant in the context of cloud-based accounting systems used in halal supply chains, which often involve sensitive information about ingredients, suppliers, and production processes that must be protected from unauthorized access and cyber threats. Companies must implement robust security measures, such as encryption, access controls, and regular security audits, to mitigate these risks.

Benefits of Business System Adoption to Halal Industry: Efficiency, Cost Reduction, and Consumer Trust

Businesses that strategically embrace and implement advanced systems stand to gain considerable advantages across multiple operational dimensions, leading to improved efficiency, substantial cost reductions, and enhanced consumer trust, all of which are crucial for long-term sustainability and competitive positioning (Blitstein, Frentz, & Jilcott Pitts, 2020). The adoption of such systems often leads to a streamlined operational framework, where processes are automated, redundancies are eliminated, and resource allocation is optimized (Wu, 2024). Improved efficiency manifests in various forms, such as faster production cycles, quicker response times to market demands, and enhanced decision-making capabilities, all of which contribute to a more agile and responsive organization (Dube, Van Eck, & Zuva, 2020). The flexibility afforded to stakeholders is crucial within the collaborative environment (Bag, Srivastava, Cherrafi, Ali, & Singh, 2024). By strategically integrating sophisticated digital technologies into the core of their operational frameworks, organizations can automate a broad spectrum of intricate processes; this pivotal shift not only curtails the dependency on manual labor through sophisticated algorithms and machine learning but also concurrently elevates aggregate productivity via optimized workflows (Stroumpoulis, Kopanaki, & Chountalas, 2024). Furthermore, the implementation of cloud-based accounting systems represents a significant advancement in financial management, offering features like simplified access and enhanced data processing capabilities compared to traditional systems (Hung, Hoa, Hoai, & Nguyen, 2023).

Cost reduction is another significant benefit, stemming from decreased labor costs, minimized errors, and optimized resource utilization, all contributing to a healthier bottom line. Organizations can diminish operational expenditures while simultaneously improving overall accuracy by automating routine operations and minimizing the potential for human error via advanced technological solutions. Moreover, the incorporation of cloud accounting facilitates a more streamlined financial management process, characterized by enhanced accessibility and superior data processing capabilities relative to conventional, on-premises systems. Accounting firms acknowledge that cost savings for clients are a major advantage (Ma, Fisher, & Nesbit, 2021). The implementation of cloud accounting has the potential to substantially improve client service through increased responsiveness, better communication, and a closer accountant-client relationship (Ma et al., 2021). The integration of technologies facilitates efficient information exchange, enables collaboration with distant partners, and supports comprehensive data collection and analysis (Friday & Japhet, 2020). This contributes to more insightful decision-making and strengthens relationships with stakeholders.

Furthermore, the establishment and maintenance of consumer trust are vital for sustainable business growth, and the adoption of advanced systems plays a

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pivotal role in achieving this goal. Enhanced data security measures, transparent communication channels, and reliable service delivery fostered by these systems contribute to building stronger relationships with customers, boosting brand loyalty, and attracting new business opportunities. Consumers increasingly value transparency, security, and reliability, and businesses that invest in systems that prioritize these aspects are more likely to gain a competitive edge in the market. Cloud accounting, for example, provides concurrent access to current financial statements online for business owners, accountants, auditors, and customers (Mujalli et al., 2024). Furthermore, businesses must dedicate time to learn the benefits of cloud computing (Mujalli et al., 2024). The digitization of business and the shift towards cloud-based solutions are key drivers shaping the market (Dimitriu & Matei, 2014).

Businesses can demonstrate a commitment to safeguarding sensitive information by implementing cutting-edge cybersecurity protocols and robust data encryption methodologies, thus reinforcing consumer confidence in their capacity to protect personal and financial data. Cloud-based accounting solutions, for instance, furnish real-time access to financial data for business owners, accountants, auditors, and clients, thereby fostering transparency and informed decision-making (Ma et al., 2021). Enterprises can improve their ability to detect and respond to fraudulent behavior by utilizing predictive analytics and machine learning algorithms, which can evaluate massive datasets to discover patterns and anomalies (Marsintauli et al., 2021). Moreover, the integration of Customer Relationship Management systems allows businesses to gain a more holistic understanding of their customers' needs and preferences, enabling them to tailor products and services accordingly and improve customer satisfaction (Ma et al., 2021). By strategically implementing advanced systems, businesses can establish a robust foundation for sustained growth and enhanced market competitiveness, positioning themselves favorably in an increasingly dynamic and technologically driven business landscape through the synergistic effects of optimized processes, reduced operational costs, and fortified consumer trust

CONCLUSION

This study points out the vital importance of integrating Accounting Information Systems (AIS) into the Halal Value Chain (HVC) as a strategic approach to ensuring transparency, traceability, and compliance with halal standards across all stages of the supply chain. As the halal industry has grown from just a religious requirement to a major global market that attracts both Muslim and non-Muslim buyers, using integrated Accounting Information Systems (AIS) has become crucial to satisfy the increasing demands from consumers and regulators for proof of halal quality.

AIS serves not only as a financial reporting tool but also as a technological infrastructure capable of monitoring and managing the flow of halal products—from procurement and production to distribution. These systems enable the real-time collection and analysis of data, allowing businesses to proactively address potential risks and enhance operational efficiency. Additionally, using AIS helps keep thorough records, making it easier to get halal certification and build trust with everyone involved. Nevertheless, the adoption of AIS within HVC presents several challenges. These include high initial investments in technology and training, limited human resources skilled in both Islamic compliance and information systems, interoperability issues across platforms, and concerns over data privacy and cybersecurity. These obstacles are compounded by the lack of standardized halal regulations across countries, which introduces complexities for multinational operations. Despite these challenges, the potential benefits significantly outweigh the limitations. Effective integration of AIS can lead to enhanced operational efficiency, cost savings, improved risk management, and increased consumer trust—all of which are vital for the sustainable development of the halal industry. Using new technologies like blockchain, Internet of Things (IoT), and cloud-based accounting makes the system better by allowing safe, clear, and real-time checks on halal compliance. Accordingly, this research points out that it requires a collaborative, multi-stakeholder approach involving industry players, governments, certification bodies, and academic institutions to support the integration of AIS within the global halal value chain. Such an approach strengthens the halal ecosystem and aligns with the broader goals of ethical business practices, technological innovation, and sustainable development within the halal economy..

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